



जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY

VOLUME 7, ISSUE 1
AUGUST 2024

DBT STAR COLLEGE
(Under Strengthening Components)

Mail to: csc@sfc.ac.in

SFC - BYTES
VOLUME 7, ISSUE 1

NEWS LETTER



DEPARTMENT OF COMPUTER SCIENCE
ST. FRANCIS COLLEGE FOR WOMEN, HYD-16

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Welcome to St. Francis College for Women
...here dreams are moulded into reality

PRINCIPAL'S ADDRESS

It's such a joy to learn that the department of Computer Science is bringing out another edition of **SfcBytes**. *Congratulations to the team working behind the scene to bring it to fruition.*

All of us know that in the computer language, a byte is a fundamental unit of data storage that typically consists of 8 bits. Our mind too is a data storage unit capable of retaining vast amounts of information, experiences, and emotions. We can choose to let our minds harbor positive or negative thoughts, memories, and beliefs. This choice we make greatly influences our mental health, behavior, and overall quality of life.

Just as a computer encodes data, our brains encode experiences and information. We hold certain memories like RAM temporarily and some like hard disk for a very long period which could even be a lifetime. Like the computer our brains can retrieve the memories we have stored.

Let us make a conscious effort to store memories of Joy, affirmations and pleasant experiences and delete negative beliefs and destructive experiences.

May all of us make a conscious effort to choose to focus on positive experiences and beliefs and create a happy and healthy atmosphere. The choice is ours!

Dr. Uma Joseph



GUIDING LIGHT: A BEACON OF INSPIRATION

Our dear Sr. Sujatha Yeruva, at the age of twenty,
Embarked her noble journey, as a Sister of Charity.
Accepting roles with steadfast integrity,
She faces challenges with unwavering clarity.

In every whisper, in every call,
She trusts His grace, through rise and fall.
Her faith remains, forever assured,
In the Good Shepherd, every prayer is heard.



Dr. Sr. Sujatha Yeruva

HOD of Computer Science Department

Associate Professor

Her laugh is infectious, a joyous sound,
Her demeanor is vivacious, with strength profound.
Her courage strong, her spirit bold,
In every task, her strength and spirit unfold.

In the realm of computers, with a doctor's grace,
She uses code to heal, in the world of cyberspace.
Her vision is to automate the SCCG space,
Adding technology to this renowned place.

UNDER GRADUATION COURSES OFFERED



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- Computer Science (AI & ML)
- Microbiology
- Organic Chemistry
- Applied Psychology
- Data Science
- Nutrition and Dietetics

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- Mass Communication & Journalism
- English

M.Com.

- Finance & Analytics

Online
Application
forms open from
1st April, 2024

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- History / Literature / Political Sc.
- Economics / Public Admn. / Political Sc.
- History / Public Admn. / Political Sc.
- Psychology / Literature / Political Sc.
- Psychology / Public Admn. / Political Sc.
- Mass Comm. / Literature / Political Sc.
- Mass Comm. / Literature / Psychology

B.Com.

- Accounting & Finance
- International Business
- Honors
- Computer Applications
- Integrated Professional Prog.

Management Studies

- Bachelor of Management Studies (BMS)

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- Botany / Zoology / Chemistry
- Applied Nutrition / Zoology / Chemistry
- Applied Nutrition / Botany / Chemistry
- Biotechnology / Zoology / Chemistry
- Biotechnology / Biochemistry / Chemistry
- Biotechnology / Microbiology / Chemistry
- Microbiology / Biochemistry / Chemistry
- Computer App. / Biochemistry / Chemistry
- Mathematics / Physics / Chemistry
- Mathematics / Physics / Computer Sc.
- Mathematics / Statistics / Computer Sc.
- Mathematics / Statistics / Economics
- Software Engineering (Hons)

Admission through Telangana
(DOST) <https://dost.cgg.gov.in>
History / Public Admn. / Political Sc.

Center for Professional Studies

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(Open for Men & Women)

- Human Resource Management
- Psychological Counseling Skills
- Clinical Nutrition and Dietetics
- FinTech
- Analytical Chemistry
- Travel and Tourism
- Business Analytics & Data Science

Scan here
for SFC
Admissions Portal

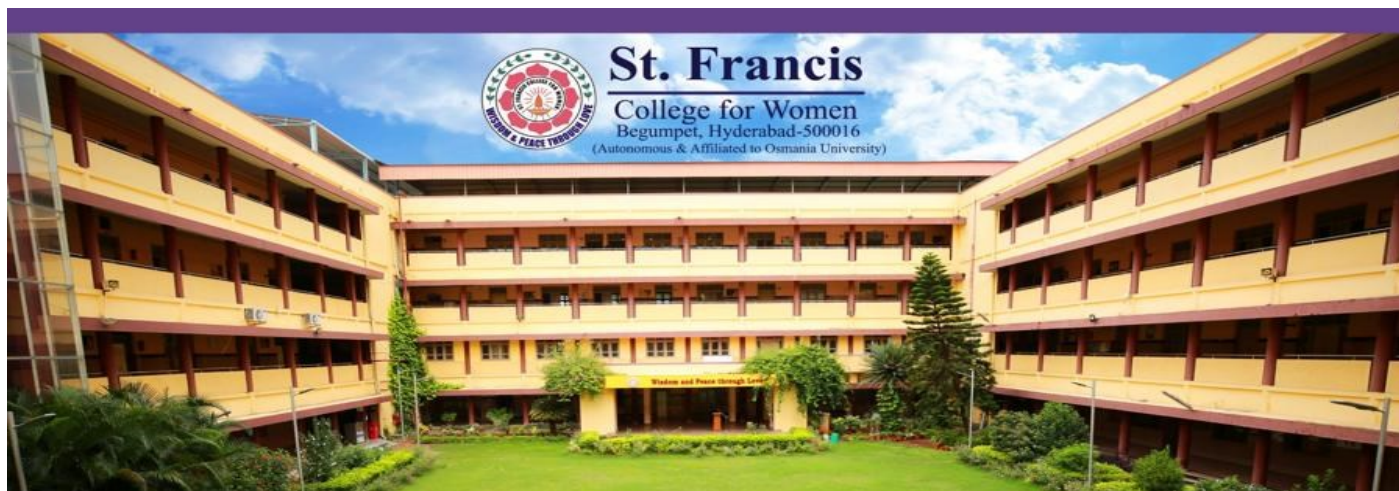


New Programmes 2024

- M.Sc. Computer Science (AI & ML)
- M.Com. Finance & Analytics
- B.A. Mass Comm. / Literature / Psychology
- B.Sc. Economics / Statistics / Mathematics

Visit us at <http://sfc.ac.in>

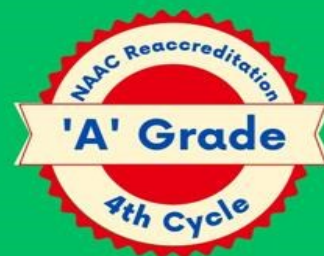
POST GRADUATION COURSES OFFERED



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ADMISSIONS
OPEN
FOR **2024 - 25**

Post Graduation



Department of Computer Science

Courses Offered

Post Graduation

- M.Sc Computer Science (AI & ML)
- M.Sc Data Science

For more info

Visit : www.sfc.ac.in

Contact us at 040 - 23403200, 23400470

SCAN TO APPLY



S.NO	TOPIC	PAGE NO
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EVENTS HELD UNDER STAR DBT



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SUSTAINABLE
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GOALS
SFC supports SDG

DBT STAR COLLEGE (Under Strengthening Component) Department of Computer Science

Organizes

C@nnect 7.4

Hands-on Training on

“Advance Building Smart IoT Solutions”

For B.Sc. Final Year (B, D, E & H) Selected Students

Date : July 25 & 26, 2024



WORKSHOP ON ADVANCE BUILDING SMART IOT SOLUTIONS

Department of **Computer science** had organized two day workshop on **Advance building smart IOT solutions** on 25th and 26th July, 2024. The resource person for same was/were **Satish Rao, IOT coach, IOT users club**. The event was organized for **BSC final year (B,D,E,H)** selected students in **CS lab 7**, Computer science department, St. Francis college for women. The advanced IOT workshop provided a comprehensive overview of technologies and platforms in the field of the Internet of Things (IoT). Workshop focused on practical and theoretical knowledge about the Internet of Things (IoT) using Arduino, NodeMCU, and IOT platforms. The workshop aimed to provide hands-on experience in building and managing IOT devices, sensors and understanding them better.

This session was truly inspiring and emphasized the importance of IoT Platforms. Participants gained hands-on experience in building and managing IoT Devices, which will be beneficial for future projects and endeavors in the IoT domain. Thanks to the resource person, computer science faculty and lab assistants without whom none of this would have been possible.



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**SUSTAINABLE
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GOALS**
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DBT STAR COLLEGE (Under Strengthening Component)

Departments of Computer Science & Mathematics

Organizes a
Field Visit to

ISRO / NRSC

Jeedimetla, Hyderabad.

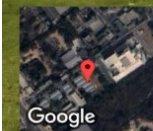


19th July, 2024



8:00am to 3:00pm

Attendees : UG II year Physical Science & MSc Mathematics Students



Hyderabad, Telangana, India
4, Shapur Nagar Main Rd, Opposite Sub Station, Phase 1, IDA Jeedimetla, Chinthal,
Jeedimetla, Hyderabad, Telangana 500055, India
Lat 17.522827°
Long 78.445178°
19/07/24 09:17 AM GMT +05:30

GPS Map Camera

ISRO FIELD TRIP REPORT

Department of computer science and mathematics had organized an Indian space research organization field trip on 19th July, two thousand twenty-four. The resource person for the same was/were T. Shanker prasad, SCI./ENG.-SF, training, education & outreach group. The event was organized for II year physical science & MSC mathematics students in the national remote sensing center (NRSC) outreach facility, Jeedimetla, Hyderabad. The field trip to the National Remote Sensing Centre Outreach Facility was an educational and inspiring experience for all participants. The visit aimed to provide insight into the workings of India's premier space research and development agency. To understand the various functions and operations of NRSC, to learn about current and upcoming space programs and to inspire students towards pursuing careers in space science and technology.

The session was attended by 160 students of and five faculty members from the department of Computer Science and Math. Indeed, it was an extremely engaging session that would be cherished by students and teachers alike.

EVENTS HELD



"Bridge Course - Beginners Guide to Computers"

The Department of Computer Science organized **C@nnect 7.0**, A Bridge Course – “Beginners Guide to Computers” for B.Sc. Ist year Computer Science students and B. Com Ist year students on 3rd July 2024 in Capitanio hall. The number of students participated in the course were 184. The resource persons were the faculty of the Department of Computer Science – Ms. Preethi, Ms. Ummyia, Ms. Jenifer and Ms. Indhuri SreeLakshmi. The first session of the event was delivered by Ms. Ummyia Mohammedi on the topic – “Types of Software and Input/Output devices”, the students learnt about various devices and their applications, Ms. Indhuri Sreelakshmi continued with the second session with the topic – “Evolution of Computers”, the students were introduced to the different generations of computers in this session. Ms. Preethi took over the third session with – “Types of Computer Languages”, the students understood the three computer languages ie High, Low and middle level languages. The last session was by Ms. Jenifer on “Microsoft Office tools”, The students learnt about MS Word, MS PPT, Ms. Excel. The session was followed by a fun quiz activity and students participated actively. Ms. Ummyia ended the session with vote of thanks. To conclude, it was a successful event which helped the students gain insight on Basics of computers


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DEPARTMENT OF COMPUTER SCIENCE

Connect 7.5

Guest Lecturer on

AN EXPLORATION INTO MACHINE LEARNING, DEEP LEARNING AND GENERATIVE AI



SHELENDRA SHARMA
PRINCIPAL ENGINEERING MANAGER
AT MICROSOFT



MURALI MOHAN MOTHUPALLY
SR. SOFTWARE ENGINEER
AT MICROSOFT



MAYANK AGARWAL
SR. PRODUCT MANAGER
AT MICROSOFT SECURITY



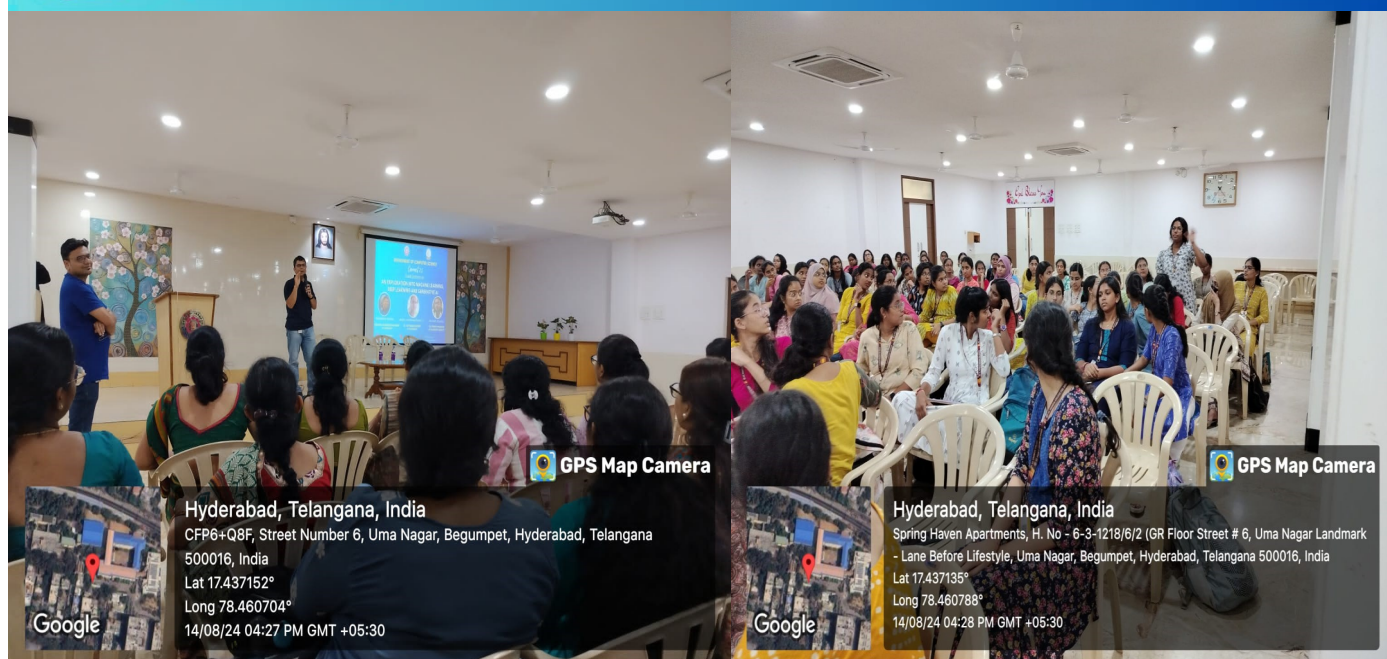
14TH AUGUST, 2024
3.00PM-4.00PM



CAPITANIO HALL



UG & PG Final Year
Computer Science Students



ISRO FIELD TRIP REPORT

Department of computer science had organized a Guest Lecture on 14th August, two thousand twenty-four. The resource person for the same was/were Shelendra Sharma, Principal Engineering Manager at Microsoft, Murali Mo-han Mothupally, Senior Software Engineer at Microsoft, Mayank Agarwal, Senior Product Manager at Microsoft Security. The Guest Lecture was organized for Final Year students of UG and PG. The speakers explained about the Evolution and Applications of Artificial Intelligence, Machine Learning, Deep learning. Indeed, it was an extremely engaging session that would be cherished by students and teachers alike.




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Department Of Computer Science
is organizing
C@nnect 7.1
A Two Day Workshop on

MACHINE LEARNING WITH PYTHON



Resource Person
Mr. Venkatarao Ganipisetty
Technical Head
UNIREACH TECHNOLOGIES PVT LTD.

 **4th & 5th July, 2024**
9:30 AM - 3:30 PM

 **Computer Science Labs**

Attendees : Final year B.Sc. Computer Science Students

 [Click here to Register](#)



2 Day Hands – on workshop on “Machine Learning with Python”

The Department of Computer Science organized **C@nnect 7.1**, 2 Day Hands – on workshop on “Machine Learning with Python” for B.Sc. Final year Computer Science students in Cs Lab 1, 2 and 3 on 4th and 5th July 2024. The resource person of the workshop was Mr. Venkatarao Ganipisetty, Technical Head, Unireach Technologies PVT LTD. The session started at 9:30am with a welcome address, prayer by Dr. Sr. Sujatha Yeruva Head, Department of computer science. Followed by the introduction to the speaker by Ms Ummya Mohammedi and Principal Dr. Uma Joseph felicitated the speaker Mr. Venkatarao Ganipisetty with a token of gratitude.

The event aimed to provide students and faculty members with insights into the impact of machine learning in data analysis with python. The students were introduced to the two important aspects of machine learning that is training and testing along with different categories of ML and prediction like, Supervised, Unsupervised, Reinforcement., Regression, Classification, Data Types ,Strings,Tuples Lists ,Top 10 libraries and their functionality.

The second session aimed on giving insights into the practical aspects of machine learning using the sklearn library. Students were introduced to Sklearn and Modeling Process. This comprehensive two-day workshop provided participants with a solid foundation in Python and machine learning, equipping them with both theoretical knowledge and practical skills.

With the best clinical applications & tools..

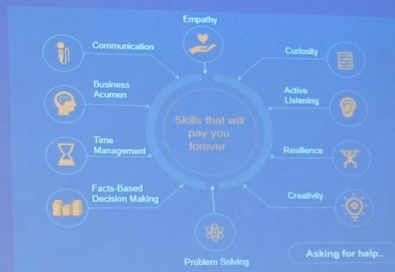


Top Technical Skills

That set you apart...

- Cloud Computing
- Bigdata Technologies
- Data Science
- AI/ML, Python, Deep Learning, NLP, Computer Vision
- Cybersecurity
- Internet Of Things (IOT)
- Wearable Technology
- Augmented Reality & Virtual Reality

In addition to technology...



Author your story

Preparing for an interview

It starts with you ...

- Know what energizes you / excites you about the job you are applying to
- Reflect on what is your unique value proposition / niche skills that sets you apart
- Ensure your resume talks to who you are and the skills / value you bring into the role

Know the Organization

- Learn about the Organization, its vision, values, and significant advancements
- Research about the Industry Domain, trends and notable role models in the space
- Write down one or two questions that you are genuinely curious about to ask the interviewer

Practice

- Radiate Confidence - Script your introduction and practice; pay attention to voice and body language
- Technical acumen - Brush up your skills - start with basics and work towards advanced concepts
- Understand the interview format and prepare for speed
- Use mock interviews to practice simple, crisp and clear responses

During the interview, if you feel nervous, know that it is okay to feel so. Take the time to calm down and proceed.

Remember, you are the author of your script

Providence

Pre-Placement Talk on Providence India

Company Overview

Providence India is a specialized healthcare technology center established in 2020 as part of the larger Providence network, a major not-for-profit healthcare system in the US with a 170-year legacy. The company's mission is to "digitally enable health for a better world" by leveraging cutting-edge technologies such as AI, ML, and cloud infrastructure.

Key Highlights

- 1. Vision & Mission :** To improve patient outcomes and caregiver experience, concentrating on developing a tech-enabled health ecosystem.
- 2. Technological Innovation :** Using strong cybersecurity, cloud-first architecture, and digital health technologies to modernize the infrastructure of health care systems.
- 3. Work Culture :** Promotes a culture of excellence and purpose by providing a unique startup setting within a large company.
- 4. Career Opportunities :** Providence India is currently seeking a varied range of expertise, including cybersecurity professionals, data scientists, software developers, and clinicians, to tackle intricate healthcare problems.

FACULTY ACHIEVEMENTS

FACULTY ACHIEVEMENTS

Dr. Sr. Sujatha Yeruva

HOD of Computer Science Department is promoted to Associate Professor



Ms. B. Jyothi Reddy

BOOK NAME: The Book Of Years

Contributed a topic in the Book

Patent Title: Tech-Driven Disease Detection: Revolutionizing Healthcare with Machine Learning and Deep Learning

Application Ref Number-202441046968, Published Date:-21/06/2024

Indian Patent Office



FACULTY ACHIEVEMENTS

Ms.B. Jyothi Reddy

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING &
MANAGEMENT



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Impact Factor: 8.448

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING & MANAGEMENT

An Open Access Scholarly Journal || Index in major Databases & Metadata

CERTIFICATE OF PUBLICATION

International Journal of Scientific Research in Engineering & Management is hereby awarding this certificate to

Jyothi Balreddygari

in recognition to the publication of paper titled

Evolving Minds and Riding Waves: Development and Progress in ChatGPT

published in IJSREM Journal on **Volume 08 Issue 04 April, 2024**

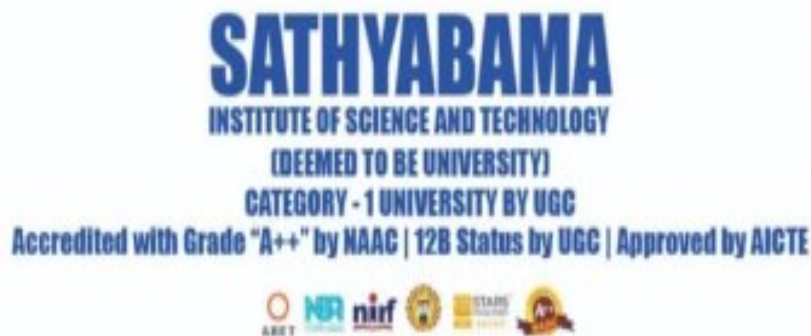
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Editor-in-Chief
IJSREM Journal

e-mail: editor@ijsrem.com

Ms. B. Jyothi Reddy

IOT SECURITY IN SMART LEARNING ENVIRONMENTS



Certificate of Participation

This certificate is awarded to Dr. / Ms. / Mr. **Jyothi Balreddygari, Research Scholar,**
 of **BESTIU**..... In recognition of your active participation and
 valuable contributions of paper presentation titled " **IOT SECURITY IN SMART LEARNING ENVIRONMENTS**
 on....." presented on 12th april 2024. We extend
 our sincere appreciation and gratitude. The Department of Visual Communication at Sathyabama Institute of Science and
 Technology (Deemed to be University) acknowledges your presence and involvement in the "International Conference on
 Innovative Techniques in Artificial Intelligence and Communication Technologies (ICITAICT 2K24)". Your presence and
 engagement have greatly enriched the discussions and activities of the conference, fostering an AI of learning and collaboration.
 Your commitment to excellence and dedication to the field are truly commendable.

Dr.T Sasipraba
Vice Chancellor

Dr. N. Nazini
HoD, Visual Communication

Dr. N. Raja
Assistant Professor, Convenor



Ms. B. Jyothi Reddy

AN INTELLIGENT DATA ANALYSIS FOR RECOMMENDATION SYSTEMS



ATAL/2023/1701843387



ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi – 110 070

AICTE Training and Learning (ATAL) Academy

Certificate

It is certified that Miss B. JYOTHI, Asst. Professor & Research Scholar of St. Francis College for Women has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on An Intelligent Data Analysis for Recommendation Systems at INSTITUTE OF AERONAUTICAL ENGINEERING from 11/12/2023 to 16/12/2023.

Coordinator

Bureau Head (ATAL)

FACULTY CONTRIBUTION

FACULTY CONTRIBUTION



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SFC Supports SDG



DEPARTMENT OF
MASS COMMUNICATION & JOURNALISM

GUEST
LECTURE

TOPIC: HTML AND CSS

13 AUGUST, 2024

11:40 AM

FOR MA II



MASS COMM LAB



MS. AFEEFA
IT ADMIN
ST.FRANCIS COLLEGE
FOR WOMEN



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E-Content Development Committee in Collaboration with IQAC

Organises
Workshop on

Moodle

Resource

Persons



Dr. Kanchana

Department of Biochemistry



Ms. Khalida Tabassum

Department of Computer Science

21 JUNE

Start At 12:00 PM – 01:10 PM
Computer Science Lab 5

STUDENT ACHIEVEMENTS

STUDENT ACHIEVEMENTS

M.k varshitha

121322043020

Bsc mpcs 3b

1.Northern Virginia community college

2. Community college initiative program CCIP global program 2024-2025

A one year program in diploma IT (artificial intelligence and data analytics)



Pragya Jain
USG of Hospitality
Concordia March 15-17 2024



FACULTY ARTICLES

GENERATIVE AI

Generative AI refers to artificial intelligence systems that can create new content, such as text, images, music, and more. These systems are typically powered by machine learning models, especially deep learning techniques, which are trained on large datasets to understand patterns and generate novel outputs that mimic the training data. Some common applications of generative AI include Text Generation, Music Composition, Video and Animation.

Text Generation Text generation with Generative AI involves creating human-like text based on given inputs or prompts. The process relies on advanced language models, which are trained on vast amounts of textual data to understand and replicate human language patterns. Key Models and Technologies are:

- **GPT (Generative Pre-trained Transformer):** Developed by OpenAI, models like GPT-3 and GPT-4 can generate coherent and contextually relevant text.
- **BERT (Bidirectional Encoder Representations from Transformers):** Developed by Google, BERT is designed for understanding the context of words in search queries and other NLP tasks.
- **T5 (Text-To-Text Transfer Transformer):** A model by Google that treats all NLP tasks as text-to-text problems, making it versatile for various applications.

Image Creation: Generative AI for image creation involves using advanced machine learning models to create new images based on given inputs or prompts. These models can generate highly realistic images, artistic renderings, and even entirely new concepts that don't exist in the real world. Key Models and Technologies are:

1. **GANs (Generative Adversarial Networks):** A type of neural network where two models, a generator and a discriminator, are trained together to produce realistic images.
2. **VAEs (Variational Autoencoders):** Another type of neural network that learns to encode and decode data, generating new images by sampling from the latent space.
3. **Diffusion Models:** A newer approach to generative modeling that gradually adds noise to data and learns to reverse this process to generate images.

Music Composition: Generative AI in music composition involves using AI algorithms to create music autonomously or assist musicians in the creative process. These systems analyze patterns in existing music to generate new compositions, harmonize melodies, and even create entirely new genres. Key Models and Technologies are:

1. **RNNs (Recurrent Neural Networks):** Especially LSTM (Long Short-Term Memory) networks, which are effective in handling sequential data like music.
2. **Transformers:** Models like OpenAI's MuseNet, which use transformer architecture to generate complex and coherent music pieces.



Dr. Sr. Sujatha Yeruva
M.Sc., Ph.D.
Head, Dept of Computer
Science

"Programs are written to be read by humans and only incidentally for computers to execute."

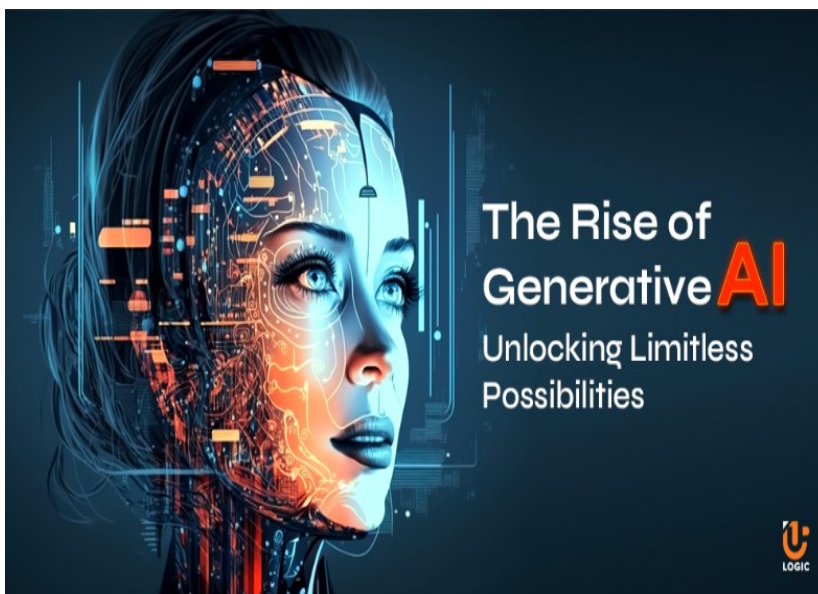
— Abraham

3. **GANs (Generative Adversarial Networks):** Used to generate new music by training a generator and discriminator network to create and evaluate music, respectively.

Video and Animation: Generative AI in video and animation involves using AI models to create, enhance, or manipulate video content and animations. This technology leverages deep learning techniques to produce realistic and high-quality visuals, automate animation processes, and even create entirely new video content from scratch. Key Models and Technologies are:

1. **GANs (Generative Adversarial Networks):** Used to generate realistic video frames and improve video quality.
2. **RNNs (Recurrent Neural Networks):** Effective for handling sequential data, such as video frames, and generating coherent video sequences.
3. **Transformers:** Increasingly applied in video generation and animation for their ability to capture long-range dependencies and complex patterns.
4. **Diffusion Models:** Utilized for generating high-quality frames by iteratively refining noisy images.

Generative AI can be used in various industries, including entertainment, advertising, education, and more, to enhance creativity and efficiency. However, it also raises ethical and societal issues, such as the potential for misuse, bias in generated content, and the impact on jobs and creativity.



"The best way to predict the future is to invent it."

— Alan Kay

LARGE LANGUAGE MODELS

A large language model (LLM) is an AI program used to generate text. As it works on big sets of data, it is named as large. They are built on Machine learning. LLMs can make predictions based on small number of prompts or inputs.

LLM is a computer program that can recognize and understand human language and other types of complex data. LLMs are prepared on data that has been collected from the Internet, like millions of gigabytes worth of text and the quality of the data collected will impact how well LLMs will learn natural language, so an LLM's programmers may use a more curated data set.

LLMs are used to do a number of tasks. One of the uses is their application as generative AI. When asked a question, LLM will give text as response. The LLM ChatGPT creates essays, poems, and other textual forms in response to user inputs.

LLMs use a type of machine learning called deep learning to understand how characters, words, and sentences work together. Deep learning includes the probabilistic analysis of unstructured data, which enables the deep learning model to recognize distinctions between pieces of content without human intervention. LLMs are further trained via tuning: which are fine-tuned or prompt-tuned to the task that the programmer wants to do, like interpreting questions and generating responses, or translating text from one language to another. Any large, complex data set can be used to train LLMs, including programming languages. Some LLMs can help programmers write code. LLMs can be components of models that do more than just generate text. Recent LLMs have been used to build sentiment detectors and generate image captions.



“Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.”

— *Albert*

DRIVING INNOVATION: TECH STARTUPS ON INDIAN COLLEGE CAMPUSES

India's dynamic and ever-evolving technological landscape has seen an impressive surge in college-based entrepreneurship. Today, Indian college campuses are buzzing with innovative ideas and entrepreneurial ventures, spearheaded by ambitious and tech-savvy students. This wave of college entrepreneurship is transforming India's business ecosystem, driving economic growth, fostering innovation, and positioning the country as a global startup hub. The technological surge of India's college entrepreneurs and its profound implications is given here.

The Rise of College-Based Startups

The rise of college-based startups in India reflects a shifting mindset away from traditional job security towards entrepreneurship, fueled by inspiring success stories of Indian entrepreneurs, encouraging students to innovate and pursue ambitious ventures.

Key Drivers of Technological Entrepreneurship

Access to Technology and Resources: The digital revolution has significantly boosted entrepreneurship among Indian college students by providing widespread internet access and affordable smartphones, enabling access to crucial tools and information. Furthermore, universities offer advanced technology and research facilities, supporting students in prototyping and refining their business ideas at minimal cost.

Supportive Ecosystem: India's startup ecosystem has rapidly expanded with diverse stakeholders such as incubators, accelerators, co-working spaces, and government initiatives like "Startup India," providing collaborative environments, financial resources, and regulatory support for thriving startups.

Collaborative Environment: The diverse student body in universities offers numerous interdisciplinary collaboration opportunities. Engineers, designers, business majors, and computer scientists can pool their skills to create comprehensive and innovative solutions. This collaborative approach is essential for developing well-rounded and market-ready tech products.

Competitions and Grants: Many universities host competitions that reward promising startups with seed funding, further encouraging entrepreneurial pursuits. Images
Src: <https://www.freepik.com/free-photos-vectors/startup>.

Success Stories and Their Impact:

Several successful tech startups have originated from Indian universities, setting inspiring examples for aspiring entrepreneurs. For instance, startups like Ola and Swiggy, founded by IIT graduates, have grown into major players in the transportation and food delivery sectors, respectively. Globally, Facebook, which started as a small project in a Harvard dorm room, has grown into one of the world's largest social media platforms. Google as a research project by Stanford Ph.D. students, DoorDash founded by Stanford students, and Snapchat created at Stanford University.

Overcoming Challenges: Despite the challenges of balancing academics with startup demands, limited industry experience, and securing funding, the passion, creativity, and resilience of student entrepreneurs often enable them to overcome obstacles and achieve remarkable success.



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"The only way to do great work is to love what you do."

— Steve Jobs

The Future of College-Based Entrepreneurship: The trend of tech startups on Indian campuses is accelerating, with evolving technology creating innovation opportunities and universities increasingly supporting student entrepreneurs, equipping them with sought-after skills and experiences for future technological advancements.

Conclusion

The technological surge of India's college entrepreneurs marks a significant shift in the nation's mindset and aspirations. With access to technology, a supportive ecosystem, and evolving perceptions of failure, young Indians are increasingly viewing entrepreneurship as a viable career path. This transformation has the potential to drive economic growth, spur innovation, and address critical challenges, positioning India as a global entrepreneurial powerhouse. As momentum builds, the world can expect to see more Indian startups making a significant impact and redefining the entrepreneurial landscape.



*"What lies behind us
and what lies before
us are tiny matters
compared to what
lies within us."*

*- Ralph Waldo
Emerson*

CRYPTOGRAPHY

Does that word Cryptic fascinate you? Does that word Cryptography make you think that you need to know more about it. Then let's start exploring more !!!!!

The prefix “crypt” means “hidden” and the suffix “graphy” means “writing”. Cryptography is a technique of securing communication by converting plain text into ciphertext. Now what is this ciphertext? we should start our understanding from the word cipher which has a dictionary meaning

“a secret or disguised way of writing; a code”.

So something which the sender wants to hide from others and want only the receiver to understand. But how are we going to implement and achieve this??

By using cryptography and different algorithms.

Cryptography is a technique of securing information and communications through the use of codes so that only those persons for whom the information is intended can understand and process it. Thus preventing unauthorized access to information. It involves various algorithms and protocols to ensure data confidentiality, integrity, authentication, and non-repudiation.

In our modern digital age, cryptography has become an essential cybersecurity tool for protecting sensitive information from hackers and other cybercriminals. Cryptography plays a vital role in our daily lives, ensuring that sensitive data like credit card numbers, e-commerce transactions and even WhatsApp messages remain confidential and secure.

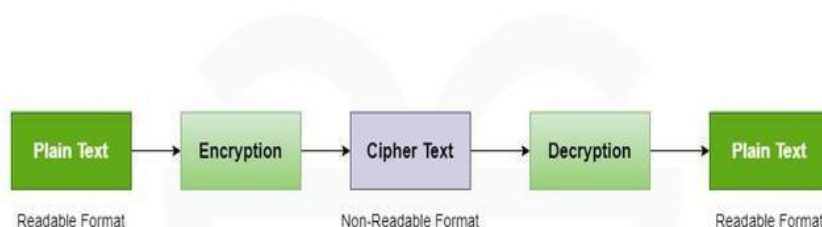
There are two main types of encryptions in use today: symmetric cryptography and asymmetric cryptography. Both types use keys to encrypt and decrypt data sent and received. There are also hybrid cryptosystems that combine both.

Symmetric cryptography use single keys and decrypt data. Algorithms such as the Advanced Encryption Standard (AES) and Data Encryption Standard (DES) are symmetric systems.

Asymmetric cryptography uses multiple keys i.e some shared and some private. In this way, the sender and receiver of an encrypted message have asymmetrical keys, and the system is asymmetrical. RSA—named after its progenitors Rivest, Shamir and Adleman—is one of the most common public key encryption algorithms.



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“The purpose of software engineering is to control complexity, not to create it.”

— Pamela Zave

TIME SERIES ANALYSIS USING ADVANCED STATISTICAL METHODS IN CYBERSECURITY

Time series analysis using advanced statistical methods is a crucial tool in the realm of cybersecurity, offering insights that help detect and mitigate threats effectively. In cybersecurity, time series data represents sequential measurements of activities over time, such as network traffic patterns or system logs. Advanced statistical techniques analyze these data streams to identify abnormal patterns that may indicate security breaches or malicious activities.

One key method involves seasonal decomposition, which breaks down time series data into components like trend, seasonal fluctuations, and random noise. This approach helps cybersecurity analysts understand recurring patterns and anomalies within the data, aiding in early detection of potential threats.

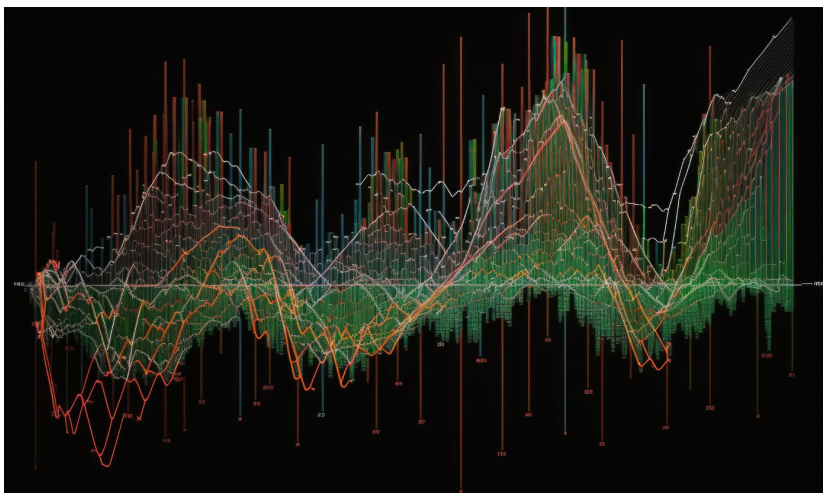
Another powerful technique is the Autoregressive Integrated Moving Average (ARIMA) model. ARIMA models are widely used for time series forecasting and anomaly detection. They can capture complex dependencies in cybersecurity data, enabling analysts to predict future trends and deviations from expected behavior. By leveraging ARIMA models, cybersecurity professionals can build robust intrusion detection systems and predict network traffic spikes indicative of cyber attacks like Distributed Denial-of-Service (DDoS).

In practical applications, these advanced statistical methods are integrated into real-time monitoring systems. They help in detecting anomalies in user behavior, identifying unauthorized access attempts, and predicting potential vulnerabilities before they are exploited. By continuously refining these techniques and incorporating machine learning approaches, cybersecurity experts can stay ahead of evolving threats and protect critical systems and data effectively.

In conclusion, time series analysis using advanced statistical methods is essential for enhancing cybersecurity measures. These methods not only provide insights into historical data but also enable proactive measures to safeguard against cyber threats, thereby ensuring the integrity and security of digital infrastructures.



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"The journey of a thousand miles begins with one step."

— Lao Tzu

THE SACRED AND THE SYNTHETIC: AI'S IMPACT ON SPIRITUAL PRACTICES

As artificial intelligence (AI) becomes increasingly integrated into our daily lives, it's not only changing how we interact with technology but also how we connect with something greater than ourselves. The convergence of AI and spirituality is raising intriguing questions about the nature of faith, consciousness, and the human experience.

Virtual Rituals and Digital Devotion

AI-powered virtual reality experiences are enabling people to engage in immersive spiritual practices, such as virtual meditation and prayer. These digital sacred spaces offer a sense of community and connection for those who may be geographically or physically isolated.

AI-Generated Sacred Texts

Researchers have developed AI algorithms that can generate sacred texts, such as scriptures and prayers, based on patterns and structures found in existing religious texts. This raises questions about the role of human creativity and divine inspiration in spiritual expression.

The Future of Spiritual Leadership

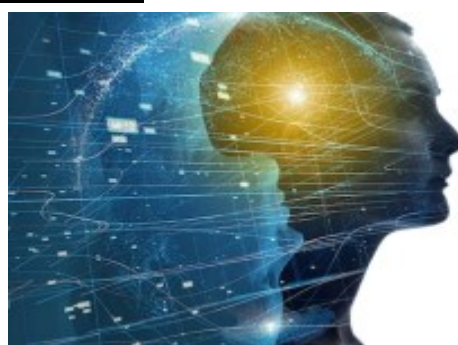
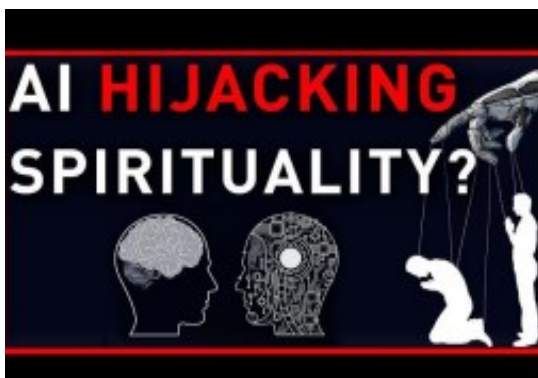
As AI assumes more prominent roles in spiritual guidance, what does this mean for human spiritual leaders and their roles in our lives? Will AI augment or replace human spiritual guidance?

Conclusion

The intersection of AI and spirituality invites us to reexamine our beliefs and values. While AI offers innovative ways to connect with the sacred, it also prompts us to consider the essence of spirituality and what it means to be human. As we navigate this uncharted territory, we must prioritize responsible AI development that honors the complexity and diversity of human spiritual experiences.



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*"Creativity is
intelligence having
fun."*

— Albert Einstein

STUDENT ARTICLES

VIRTUAL COMMUNICATION

Virtual Communication: A new era of communication

Virtual Communication refers to the communication that is done via electronic means such as computers and mobile devices, among others, rather than an in-person interaction. The rise of the internet and social media, advancements in science and technology fields, and AI have given global individuals the opportunity to connect and communicate virtually.

Common tools for virtual communication

Texting: Text messaging is often used between private mobile phone users to communicate very brief messages. The term initially referred to messages sent using the Short Messaging Service (SMS). It has enormously grown from including just the alphanumeric text to including multimedia messages using the Multimedia Messaging Service (MMS) and Rich Communication Services (RCS), which can contain digital images, videos, and sound content. Ideograms, referred to as emojis or emoticons, were introduced later.

E-mails: The Electronic-mails have been the most ubiquitous and reliable communication medium. Email systems today are based on a store-and-forward model, i.e., the servers accept, forward, deliver, and store messages. Platforms like Gmail, Outlook, and Yahoo Mail have enabled asynchronous communication via written messages.

Videotelephony: Also referred to as video conferencing or video call, in which audio and video are used for real-time communication. Advancements in video compression have allowed it to be transmitted over the Internet, which was previously difficult due to the impractically high bandwidth requirements of uncompressed videos. Video conferencing is also known as visual collaboration, which is a groupware that is designed to help people working on a common task to attain their goals. Some well-known visual collaboration softwares include Microsoft Skype, Zoom, Apple FaceTime, and Google Hangouts.

Virtual communication is an integral part of modern work and personal interactions. Communication has evolved in the last few decades, and very soon we will see a range of new products and technologies with many advantages and features that will assist in making the virtual communication the base of communication in future.



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*"Believe you can
and you're halfway
there."*

— Theodore

"THE NEXT GENERATION OF PROGRAMMING LAN-

The world of technology is ever-evolving, and at the heart of this constant innovation are programming languages. These languages are the tools that enable us to turn abstract ideas into tangible technology. As we look to the future, several next-generation programming languages are poised to shape the next wave of digital transformation. In this article, we'll dive into some of these emerging languages, highlighting their unique features .

Rust: Safety Meets Performance

Rust has been gaining popularity for its promise of memory safety without sacrificing performance. Designed to prevent common bugs found in other systems languages like C++, Rust achieves this through its ownership model, ensuring memory safety and encouraging more reliable code. Simple yet powerful. Beyond basics, Rust's advanced features, such as zero-cost abstractions, make it an excellent choice for high-performance applications, from operating systems to game development.

Julia: High-Performance Numerical Analysis

Julia is a high-level, high-performance dynamic programming language designed for technical computing. With syntax that is familiar to users of other technical computing environments (like MATLAB), Julia stands out for its speed, which is comparable to statically-typed languages.

Kotlin: Revolutionizing Android Development

Kotlin, developed by JetBrains, has transformed Android app development. Its interoperability with Java, coupled with features that ensure concise and expressive code, make Kotlin a go-to language for modern Android applications. Kotlin's null safety and extension functions, among other features, reduce the amount of boilerplate

code developers need to write, enabling faster and more reliable app development.

Swift: The Future of iOS and macOS Applications

Swift is Apple's programming language for iOS, macOS, watchOS, and tvOS app development. Known for its speed and efficiency, Swift is designed to work with Apple's Cocoa and Cocoa Touch frameworks, offering a modern syntax that is fun to work with.

In Conclusion , The future of programming is bright, with languages like Rust, Julia, Kotlin, and Swift leading the charge. Each brings its own strengths to the table, whether it's Rust's memory safety, Julia's computational prowess, Kotlin's succinct syntax, or Swift's seamless integration with Apple ecosystems. For developers, embracing these next-generation languages means not only keeping pace with technological advancements but also unlocking new possibilities in software development.

As we continue to push the boundaries of what's possible in technology, the evolution of programming languages will play a pivotal role. The future is indeed now, and it's an exciting time to be a part of the tech industry. Whether you're a seasoned developer or just starting out, exploring these next-generation languages is a step toward shaping the future of technology.



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*"Computers where
logic meets
imagination,
creating a
symphony of
Innovation."*

- Tim Cook

THE RISE OF AUTOMATED SYSTEM

The contemporary industrial world is experiencing a silent revolution; it is fast becoming more automated, and this has changed how we live and do business. These changes have been brought about by developments in artificial intelligence, machine learning and robotics that now enable machines to carry out work with a level of precision unmatched before.

Automation has resulted in the development of smart factories within the manufacturing industry as well. These factories have interlinked systems and machines that enhance production processes, minimize wastages and improve the quality of end products. Previously humans used to perform such delicate tasks like welding and intricate painting. Currently, robots are doing these jobs on assembly lines leaving human beings free to think on innovations that may be applied elsewhere for example in artistry. It advances labor productivity, alleviating shortage of workforce and enhancing workplace safety.

Service sector hasn't escaped automation either. In customer relations, AI supported chatbots take care of routine queries while human agents handle complex issues posed by customers simultaneously providing instant feedback on any question or comment made by a client. Retailers use automatic inventory management systems to ensure efficient supply chains and shelves stocked properly.

Everyday lives are now influenced by automation through smart home technologies. Remote control of such gadgets as thermostats, security systems and lighting has made them responsive to our daily activities and individual preferences. Apart from convenience, this has improved energy conservation in our lives reducing our pollution levels



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To conclude, automation is taking over the world today and driving progress across industries while making life better day by day. Striking a balance between advantages of automation on one hand and it has the potential to transform life for good; hence understanding how best we can effectively exploit opportunities associated with automated systems will lead us towards a brighter future where every person will be able to benefit from the developments brought about by automation.

*"The difference
between ordinary
and extraordinary
is that little extra."*

— Jimmy Johnson

THE SCIENCE & PSYCHOLOGY BEHIND SIRI & ALEXA

In today's tech world, have you ever noticed why virtual assistants like Siri, Alexa, Cortana, or Google Assistant often sound like women? There are some fascinating and rational reasons lay behind the decision.

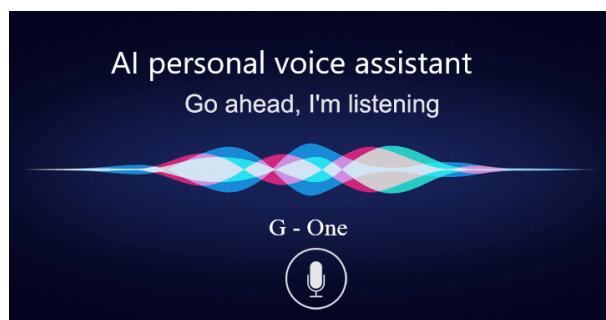


The female voices usually are more understandable and more readable; the high pitches are more impressive. For this reason, the interaction with AI is smoother and more effective for the user. Imagine being asked a question and receiving a comprehensible and helpful answer, just like being in the presence of a good friend.

The second point is psychological: Female voices are normally much more prominent in perception and much more pleasant to hear. The presence of assistants creates comfort and removes any feeling of difficulty, therefore improving the experience.

The tech industry is dominated by men, who make up only about 22% of its workforce composed of women. As such, this decision falls onto the person creating these virtual assistants to use the female voices for the same.

These are options that need to be factored in as AI hits the mainstream. The feeling and sound of tech dictate the value it shall have in our everyday interactions. The focus needs to go beyond making gadgets operable and shift to devices that are both friendly and user-friendly.



"She" is the female voice behind Alexa and Siri, designed to make life easier and more comfortable, so don't hesitate to ask about things like the weather or setting an alarm.



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"Success usually comes to those who are too busy to be looking for it."

- Henry David Thoreau

CODECRAFT: PROGRAMMING THROUGH GAMING

Programming languages can be quite tiring and incomprehensible sometimes, this makes a person

dislike the entire language itself. When things go down like this, a little amount of games will always

help. Here are few websites that help us learn programming languages through the medium of:

games

1. The SQL Murder Mystery

Learn SQL concepts and commands while solving a crime.

mystery.knightlab.com

2. CryptoZombies

CryptoZombies is an interactive school that teaches you all things technical about block-chains.

cryptozombies.io

3. Learn SQL with Police department game

SQL Police Department is an online game where you solve crimes using SQL.

sqlpd.com

4. Screeeps

It's an open-source game for programmers, wherein the core mechanic is programming.

You control your colony by writing JavaScript.

screeps.com

5. Flexbox Froggy

A game for learning CSS flexbox.

Flexbox is an important concept in CSS, so this game will teach you Flexbox in very simple way.

flexboxfroggy.com

6. CodeCombat

CodeCombat is designed in a very simple manner to help students embrace learning while playing

and writing code.

codecombat.com



"Coding is today's literacy. It is the alphabet of the 21st century."

- Nellie McKay

IS TECHNOLOGY REALLY THE JACK OF ALL TRADES?

It's incredible to look back and see how much the digital world has progressed over the years. The changes from 20 years ago to today are quite significant. As children, we couldn't have predicted these advancements. It feels like just yesterday we were dreaming of having gadgets like the ones in Doraemon, and now it doesn't seem impossible. It's interesting how "The Simpsons" show seemed to predict many future developments. How did these old shows and cartoons anticipate **future trends**? According to the show's producers, they considered social trends, politics, inventions, and some hindsight. Surprisingly, the producers didn't believe these predictions would become a reality; they thought people would be too smart to let something like that happen. It just shows that the **future is unpredictable**.

The latest growing trend in technology includes **A.I., virtual worlds, and Meta**. There have been numerous inventions made possible by technology, and many industries depend on it. With computer languages, we can create robotics, machines, gadgets, apps, security systems, and more. Some gadgets can create recipes based on user-provided ingredients. A.I. has led to the development of numerous apps and websites serving various purposes such as therapy, online companionship, information retrieval, cooking assistance, graphic generation, and creating diverse themed images using our faces, like anime, historical, or fantasy characters, among others. While there are many advantages to using technology, there are also many drawbacks if it is used for the wrong reasons. **Technology** has enabled various feats such as machine-enabled concrete construction, embroidery, sensor gadgets, and automobile manufacturing. Its widespread use is evident across all industries; for example, in the healthcare sector, technology is involved in tests, scans, surgeries, drug development, and more. In the health field, there are many technology-based resources like apps and websites. They use generative AI to recommend doctors to patients. Technology isn't just used in the medical industry; it's used in every sector. However, it's not perfect and can malfunction.

In conclusion, technology has limits, but it's always advancing. I believe there will be more groundbreaking inventions in the future. Scientists are working on technology to help people live on another planet, **making seemingly impossible inventions possible**.



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*"What lies behind us
and what lies before us
are tiny matters
compared to what lies
within us."*

- Ralph Waldo Emerson

THE OPEN SOURCE RENAISSANCE: WELCOME TO THE ERA OF DIGITAL ARTISTRY

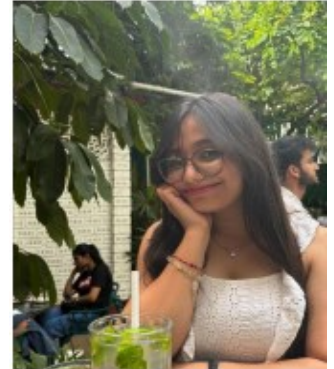
Fun fact: “The first instance of an open source software wasn’t related to software at all!”

When we hear the term open source software, we think of something along the lines of apps being available for downloading. While this isn’t far from the truth, open source software really refers to software distributed with its source code. This allows the users to access the source code within their rights and make changes according to user requirements. A few good examples of OSS applications are Linux and Mozilla Firefox.

Open source software was a concept that was first believed in by Richard Stallman. Stallman didn’t like the concept of users being unable to customize proprietary software and felt that software must be free to the user for modification and customization. Stallman’s use of “free software” led to the implication of no cost which led to the term “open source” being adopted in 1999.

As all good things do, open source software has its own set of advantages and disadvantages. With the ability to share information in real time with the help of cloud storage, programmers are using open source to connect people better. License copyleft unlike copyright gives the users permission to use, study, modify, and distribute the software according to their wishes. A major downside to OSS is vulnerability exposure. This means that the code is available to cybercriminals along with regular programmers, which could lead to problems upon improper use.

Open source software in general has been a great gift to programmers and non-programmers as it has helped widen the opportunities in the coding world. To truly understand open source software, why not try using it once and finding out?



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“Success is not final, failure is not fatal: It is the courage to continue that counts.”

— Winston Churchill

FROM VISION TO VOICE: HOW APPLE IS MAKING IOS USER-FRIENDLY FOR DISABLED USERS

Apple CEO Tim Cook once said, "We believe deeply in the transformative power of innovation to enrich lives," and this belief is what drives Apple to make technology more accessible to diverse users using AI. They are planning to introduce new accessibility features later this year.

One of the upcoming features includes eye tracking, powered by AI, which gives users the option to navigate their iPhone or iPad with just their eyes. Designed for users with physical disabilities, Eye Tracking uses the front-facing camera to set up and calibrate in seconds and employs on-device machine learning.

Another feature, called Music Haptics, allows the iPhone to play taps, textures, and refined vibrations to the audio of the music. This feature will be available as an API for developers to make music more accessible in their apps.

Listen for Atypical Speech is a new feature that uses machine learning to recognize speech patterns, especially those affected by conditions like cerebral palsy, ALS, or strokes. This feature will provide captions for spoken dialogues in live conversations and audio from apps, aiding users who are deaf or hard of hearing.

While Google, Microsoft, Amazon, Samsung, and other companies are still in the early stages, these features will likely push Apple's competitors to make their software more compatible for a diverse range of users, ushering in the new era of technology that prioritizes inclusivity.



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"Success is not the result of spontaneous combustion. You must set yourself on fire."

— Arnold H. Glasow

THE RISE OF KOTLIN:

In the ever-evolving landscape of programming languages, Kotlin has emerged as a versatile and powerful choice for developers across various domains.

Kotlin, developed in 2011 by JetBrains, is a cross-platform, generalpurpose high-level programming language. Kotlin is designed to interoperate completely with Java, and the JVM model of Kotlin's standard library relies upon at the Java Class Library, however its syntax is more concise.

Kotlin is recognized for its conciseness and safety features. It stands out as a robust language due to its functional and object-oriented programming paradigms.

It is said that Kotlin is designed to be an industrial-strength object-oriented language, and a "better language" than Java, but still be fully interoperable with Java code, permitting businesses to make a gradual shift from Java to Kotlin. Kotlin has wide range of applications such as Android App Development, Backend Development, Web Development,, Data Science and so on.

Google officially announced Kotlin as a supported language for Android development in 2017, alongside Java.. Many of Google's own Android apps, such as Google Home, Google Drive, and Google Play, have components written in Kotlin. Google continues to promote Kotlin as a modern and preferred language for Android app development.

Apart from Google ,many tech giants such as Netflix ,Uber, Alibaba ,Coursera, VMware uses Kotlin for its Android app development. In conclusion, Kotlin is serving as a powerful catalyst for innovation and efficiency. As technology advances , Kotlin stands ready to empower developers and organizations alike, driving innovation and transforming ideas into reality.



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"If you want to lift yourself up, lift up someone else."

Booker T. Washington

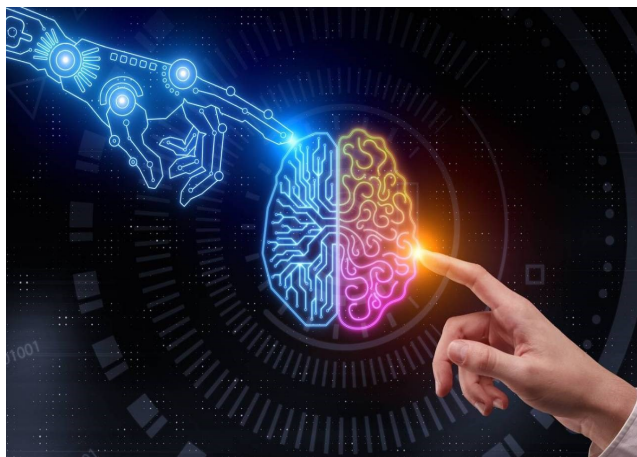
IS ARTIFICIAL INTELLIGENCE A BOON OR A CURSE?

Artificial Intelligence aka AI is one of the buzz words right from the invention of the machines, even today it is one of the widely discussed topics because of its ability to do repetitive tasks without any manual intervention. AI gives many abilities to a machine; to think, to perform a certain task, to speak, to translate, to make decisions, on whole it makes a machine to perform like a human, in short it is like a human created human rather than the God created human.

Usage of AI in this Contemporary World:

AI is everywhere. Though it is being used wisely by certain section of people for the advancement of technology, there is another set of people who are misusing AI for their personal gains. Deepfake technology which is AI based image modifier is being used to target certain actors, politicians and to spread fake news related to the famous personalities to make money, to generate unwanted violence and issues by disturbing the harmony of the society and to tarnish the reputation of the targeted people. Not just this, there can be a humongous amount of job loss among human beings because of AI, fortunately not all professions, it can also reduce the creativity and intelligence of human beings by decreasing their instincts and thinking power due to its all-time availability hereby increasing the laziness of humans. Over the top AI doesn't have ethics, due to which there is a possibility of people suffering due to its decisions. Though it has enormous benefits like its fair and non-judgemental decisions, its application in our daily life like in medical field especially in diagnosis area, automation, reduction in human error, increased productivity, faster work flow, etc; but still AI is scary. Therefore, AI should be used based on a specific set of rules, the rules which specifically protect our data and stops the improper usage of AI.

We are aware of the genuine cause of AI by its inventors and perceivers, i.e., to help the mankind in whatever way possible through technology. But we cannot expect that all the people who use AI are as genuine as its cause. One should set restrictions on AI usage like how European nations introduced AI Law in the year 2023, which sets limitations on its usage. Even India should introduce such laws, especially on the usage of AI and to protect the data which is generated every day, every second over the web. Not just our country, it is a matter of global concern, the world organisations should impose new laws pertaining to AI for its fair and authenticated usage and also to stop the wars which are based on data. AI is the best and powerful weapon, one of the most iconic inventions of this modern era, if used wisely it is welfare oriented but if used for personal gains it can definitely cause a great annihilation in any form which it takes. So, let's constrain the usage of the AI and let's protect ourselves from this very second than acting at the last moment.



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"The only limit to our realization of tomorrow is our doubts of today. Let us move forward with strong and active faith."

— Franklin D.

HAPTIC TECHNOLOGY:

The Future of Touch in a Digital World

Imagine playing a video game where you can actually feel the rumble of an engine or the grip of a sword in your hand. That's the magic of haptic technology! It uses vibrations, forces, and motions to recreate the sense of touch, making digital experiences more real and exciting.

In virtual and augmented reality (VR and AR), haptic feedback is a total game-changer. Think about putting on a VR headset and not just seeing a virtual object but actually feeling it. Whether it's the smooth surface of a futuristic gadget or the rough texture of a medieval castle wall, haptic technology makes you feel like you're really there.

But it's not just for fun and games. In the world of remote surgery, haptic technology is a lifesaver. Surgeons can operate using robotic tools that send back tactile sensations, so they can feel what they're doing as if they were right there with the patient. This makes surgeries more precise and safe, even when the doctor is miles away.

Education is also getting a touch-up. Virtual labs with haptic feedback let students feel science in action. They can sense the weight of chemicals or the force of magnetic fields, making learning interactive and hands-on, even if it's all digital.

In cars, haptic feedback helps keep drivers safe. Imagine your steering wheel vibrating if you start to drift out of your lane – it's a gentle nudge to stay focused on the road.

Conclusion: Haptic technology is bridging the gap between the digital and physical worlds. By adding the sense of touch, it's making virtual experiences feel just as real as the physical ones. As this tech keeps evolving, we're looking at a future where the lines between real and virtual blur, creating thrilling and immersive experiences like never before. The future of touch is here, and it's more exciting than ever!



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"Opportunities don't happen. You create them."

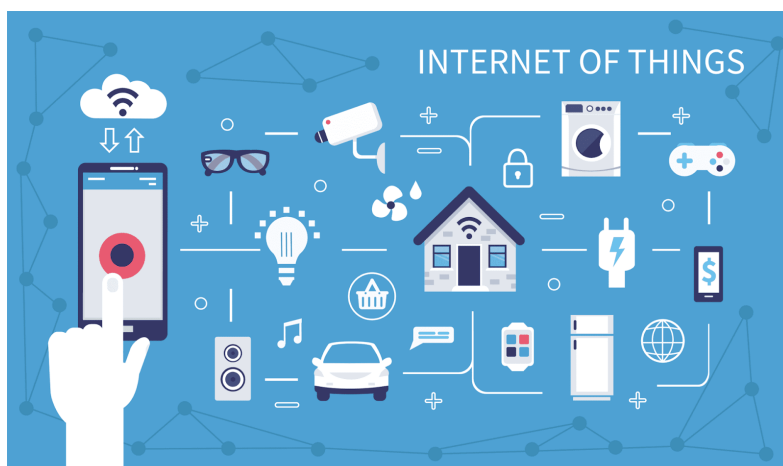
- Chris Grosser

INTERNET OF THINGS

The Internet of Things (IoT) describes a network of devices that communicate and share data over the Internet. These devices, usually with sensors, software and other technologies installed on them, cover all types of everyday items, for example, refrigerators and thermostats for homes, industrial machines or even smart city infrastructure.

Indeed, the Internet of Things boasts the immense capacity to collect and sift through bulks of information thereby making it possible for intelligent decision-making and automation. Within homes remote surveillance systems, remote-controlled locks and energy-efficient equipment are linked to mobiles with cameras. For instance, an automated thermostat realizes when the residents are away or in-house remaining on during the day thus using less electricity.

IoT is changing operations in the industrial sector through its mechanisms of predictive maintenance as well as real-time monitoring. Anomalies can be detected and failures predicted by sensors attached to machines, which in turn leads to less downtime or lower maintenance expenses. Furthermore, It renders supply chain optimization possible because it enables one to know inventory levels and movement at any given moment.



To improve urban living, smart cities use IoT. Adaptive traffic lights with real-time traffic data can reduce traffic jams. Air quality and noise pollution can be reduced by data collected from environmental sensors. Public safety is improved by advanced surveillance and emergency response systems in addition to IoT-enabled infrastructure.

Although it has its advantages, the Internet of Things presents considerable difficulties, especially when it comes to security and personal privacy. Hackers are tempted by the enormous quantity of information produced by connected devices, so making their security foolproof is extremely important. On top of this, harmonized communication should be established among a variety of gadgets developed by various producers for them to interact without problems.

To sum up, the Internet of Things (IoT) can alter many facets of everyday life and business segments through smart enablers since they interact with each other. Despite this potential being limitless in promoting efficiency gains and delivering better life standards through innovative products or services development; all these should be addressed cautiously due importance attached to security issues together with confidential matters about privacy.



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“The best way to predict the future is to create it. The only limit to our realization of tomorrow is our doubts of today.”

— Abraham Lincoln

GROWTH OF ELECTRIC VEHICLES

The growth of electric vehicles (EVs) has been remarkable over the past decade, fueled by technological advancements, supportive policies, and increasing environmental awareness. According to the International Energy Agency (IEA), the global stock of EVs surpassed 10 million in 2020, with sales increasing by 43% compared to 2019. This trend continued into 2021 and 2022, driven by strong markets in China, Europe, and the United States.

Technological advancements have played a critical role in accelerating EV adoption. Improvements in battery technology have significantly increased driving range and reduced costs. The development of fast-charging infrastructure and innovations such as solid-state batteries promise to address current limitations, making EVs more accessible and convenient for consumers.

Government policies and incentives have also been crucial. Countries worldwide have implemented various measures, including subsidies, tax breaks, and stringent emission regulations, to encourage EV adoption. The European Union's Green Deal and the United States' federal tax credits for EV purchases are notable examples.

Environmental concerns are a significant driving force behind the shift to electric vehicles. Lifecycle analysis shows that EVs have a lower carbon footprint compared to conventional internal combustion engine vehicles, especially. Despite the progress, challenges remain.

High upfront costs, limited charging infrastructure, and supply chain constraints for critical materials like lithium and cobalt pose barriers to widespread adoption. Addressing these challenges will be essential for sustaining the growth of the EV market.

In conclusion, the growth of the electric vehicles is a promising development towards a sustainable transportation future.



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"Great things are not done by impulse, but by a series of small things brought together."

— Vincent Van Gogh

FACIAL RECOGNITION

Facial recognition is one of the advanced forms of biometric authentication. It can identify and verify a person using facial features. This authentication typically searches for human eyes, followed by eyebrows, nose, mouth, nostrils, and iris. Face recognition uses AI to detect Human faces from the background.

Facial recognition is used to enable secure entry. It is most widely used in offices, and public spaces. In whole process of face recognition is contactless, which means there is no occurrence of using any fingerprints or another passwords. This face recognition makes Aadhaar authentication transactions even more robust and secure. Face detection uses deep learning, a complex but effective AI approach. Facial recognition systems capture and analyze unique facial features, while fingerprint recognition relies on distinct patterns on fingertips.

Users generally find facial recognition to be faster than fingerprint scanning, as it requires fewer steps to authenticate and gain access to their devices. Facial recognition has been used in many working areas such as in schools, colleges, working areas for attendance purpose.



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*"You have within
you right now,
everything you
need to deal with
whatever the
world can throw
at you."*

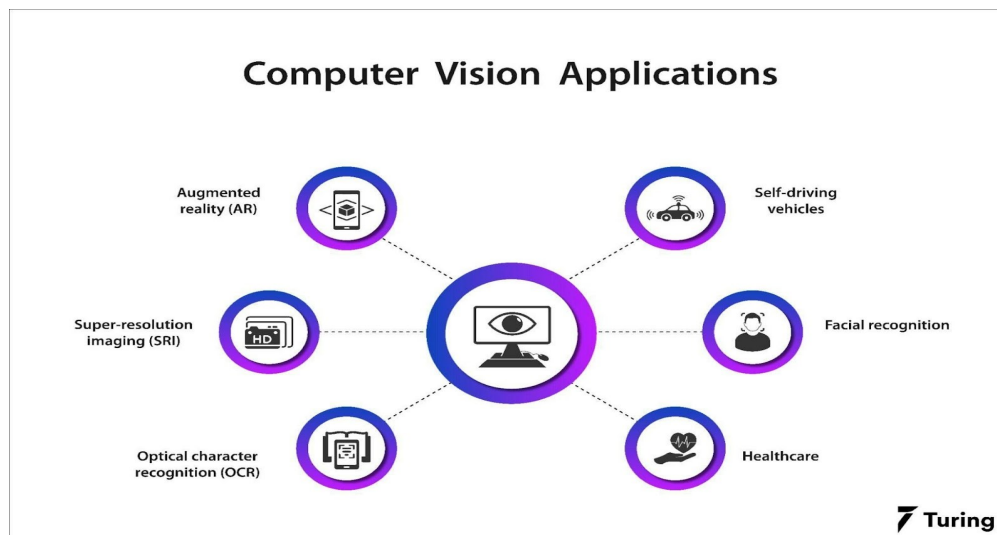
— Brian Tracy

EXPLORING THE FUTURE OF COMPUTER VISION: VIEWING THE WORLD THROUGH AI'S EYES

In the ever-changing technology landscape, one area that has tremendous potential for growth is computer vision. Imagine a world where machines can read visual data like humans do. It is made possible by developments in artificial intelligence (AI) and machine learning, which will be applied in various industries ranging from healthcare to self-driving cars.

Computer vision allows machines to see and understand pictures by processing them and interpreting their meaning. There are limitless possibilities for innovation unlocked by this visual perception ability that once seemed only in science fiction.

Applications Transforming Industries:



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Medical images analysis is paramount in health care through computer vision. A radiologist could be supported by AI algorithms which can quickly and accurately identify abnormalities on x-rays or MRIs that may lead to early detection of diseases thereby saving lives

In retail, customer experiences are enhanced using computer vision with personalized shopping recommendations, and no check out stores. Cameras oversee inventory and monitor customers' actions so as to optimize the layout of the store while ensuring that shelves are replete with popular items.

Challenges and Ethical Issues:

On the other hand, with progress come obligations. Rapid adoption of computer vision technology raises questions about privacy, surveillance, and fairness. For instance, facial recognition systems have led to discussions on civil liberties and the consequences of mass surveillance.

Consequently, it is crucial that computer vision algorithms are reliable as well as accurate. To mitigate biases and ensure fair outcomes, they need to be robust in different environmental conditions and diverse demographics.

*The function of
good software is
to make the
complex appear
to be simple.*

- Grady Booch

AI & GENAI: REVOLUTIONIZING THE FUTURE WITH PROMISE AND PERILS

Global industries are being transformed using Artificial Intelligence (AI), whose impact is already evident in our close interaction with what we call Technology. As of 2024, AI had been significantly enhanced using machine learning and neural networks that facilitated more complex problem solving leading to artificial intelligence that could perform similar or even better tasks than a human being can do. AI could transform the practice of medicine, as systems like Google's medical AI has demonstrated for specific difficult diagnostic tasks. In other words, Generative AI (GenAI) is a big jump in the skills of Artificial Intelligence Tech. - GenAI systems: Systems capable of creating new content, such as OpenAI's GPT-4 or Google's DeepMind Gemini. More generally, new opportunities are being created across various creative industries.

Looking ahead AI and the future of GenAI, there is much hope amidst uncertainty. While, these technologies also hold the promise of making substantial progress in various fields including health care to entertainment, etc. However, downstream moral and societal consequences of AI use more generally also have to be mitigated carefully. While researchers and policymakers are currently constructing frameworks and tools to guarantee that AI can be utilized mindfully – including types of deepfake discovery or approaches to relieve AI predispositions.

Enforcing these requirements presents its own challenges, though. It is difficult to rapidly enforce regulations in the fast-moving environment of AI development and because technology knows no bounds. To conclude, AI as well as GenAI have been changing the technology paradigm too radically providing more opportunities than ever before while still managing completely different challenges.



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*"It does not matter
how slowly you go
as long as you do
not stop."*

— Confucius

EDUCATIONAL ROBOTICS

Robotics is the plot of building, designing and programming robots – machines that can perform tasks independently or with guidance of human.

Educational robotics is a vital area that integrates the principles of robotics with educational practices.

Educational robotics is a designed to introduce students to Robotics and Programming interactively from a very early age. By integrating robotics into the classroom, educators aim to enhance student engagement, foster problem-solving skills, and prepare students for the technological demands of the future.

We will learn how and explore the various aspects of educational robotics, and its impact on modern education.

Educational robotics involves the use of programmable robots to facilitate learning across various subjects, including science, technology, engineering, and mathematics (STEM). These robots range from simple programmable toys for young children to complex systems used in higher education and research.

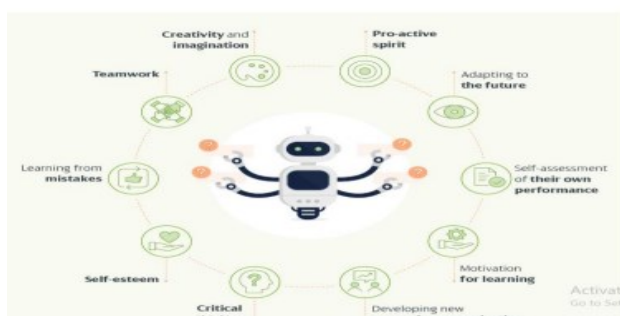
There are various types of Educational Robotics which include Programmable Toys, Modular Robotics Kits, Humanoid Robots.

Robotics grabs student's interest through interactive and hands-on learning, making abstract concepts more tangible. As automation and AI has become integral to many industries, robotics education provides essential skills for future job markets. Robotics permits students to see the connections between different areas of study and develops their skills such as Collaboration, Failure management, Self-awareness, Adaptability, Self-Assessment. Educational robotics uses a programming technique called "Block coding."

Robots like Sphero and Ozobot are used in coding classes to teach students various programming languages and concepts through practical applications. EGO Mindstorms and VEX Robotics kits are integrated into science and technology classes to teach engineering principles, programming, and problem-solving skills.



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"The only way to achieve the impossible is to believe it is possible."

— Charles Kingsleigh

“GROWING SMARTER: HOW PREDICTIVE ANALYTICS IS TRANSFORMING FARMING”

Predictive Analytics in agriculture is like having a crystal ball for farming purposes. It involves applying of advanced data analytical techniques to agriculture data to make predictions about various aspects of farming operations. It uses past and current information about things like weather, soil, crop health, pests, and market trends to guess what might happen on the farm. This helps farmers to make smarter choices about what to do for growing better crops.

Here's how predictive analytics is used in agriculture:

1. **Weather Forecasting:** Predictive analytics models analyse historical weather data and climate patterns to forecast future weather conditions. This helps farmers to plan their planting, irrigation, and harvesting schedules more effectively and mitigate the risks associated with adverse weather events.
2. **Pest and Disease Management:** Predictive analytics can figure out how likely it is for pests or diseases to show up based on things like the environment and past info. When it spots a possible problem early on, farmers can take action to stop it, like changing when they plant, using methods to control pests, or treating the affected areas directly.
3. **Soil and Crop Monitoring:** IOT sensors, satellites, and other fancy gadgets gather info right from the field on things like how wet the soil is, what nutrients are in it. Then, smart computer programs look at all this data to tell farmers stuff like how the soil's doing, how well the crops are growing, and what they need more of. This helps farmers water, fertilize, and protect their crops just right.

Overall, predictive analytics in agriculture enables farmers and agribusinesses to make data-driven decisions, improve productivity and sustainability, and also mitigate risks associated with weather variability, pest infections, and market fluctuations. It also empowers farmers to optimize their operations, as well as increase yields, reduce the input costs.



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“Don’t wait for opportunity. Create it.”
— George Bernard Shaw

5 TH GENERATION- A NEW ERA OF CONNECTIVITY

Imagine it's an emergency and you want to call someone for a help or downloading a movie in HD quality within a few seconds, Cool Right? The 5th Generation is all set to transform our life where virtual reality experience is as smooth as real life!!!

5G is notably faster than 4G as it provides 10-Gigabits Per Second (Gbps) to 100 Megabits Per Second (Mbps) which is 100 times faster than 4G.

The influence of 5G on user experience will become higher as it delivers several key factors such as Speed & Performance, Connectivity, Low- Latency, capacity, Support for Emerging Technologies such as Virtual Reality (VR).

The Speed & performance will allow the users a smooth online experience, flawless streaming, faster downloads.

5G has a low latency that is 1 millisecond which enables in real time data processing across various fields such as remote surgery or self-driving vehicles where each and every second is very crucial for providing smooth and better experience.

5G has the ability to connect millions of devices at the same time which will result in the support of the growing Internet of Things (IoT), and cover the smart cities with traffic systems or any other public services.

5G can be used in Agriculture which enables farmers to use sensors and drones which will collect the information about soil condition, crop health & weather which will help farmers to make proper decisions about irrigation, use of fertilizer, use of pest and maximizing the crop yield.

The role of 5G in entertainment increases user experience as live events, gaming tournaments can be held in real-time with high quality & video streaming over 5G networks. As the technology is evolving there will be some challenges for everything, similarly 5G also faces challenges such as high infrastructure and cost, security, possible health effects which needs to be properly and carefully managed.



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*"The best way
to predict the
future is to
create it."*

*- Peter
Drucker*

VIRTUAL AND AUGMENTED REALITY: THE FUTURE OF IMMERSIVE EXPERIENCES

tual Reality (VR) and Augmented Reality (AR) represent groundbreaking technologies reshaping our digital and physical realities. VR transports users into entirely synthetic environments, creating immersive experiences through specialized headsets and controllers. This technology finds applications in diverse fields such as gaming, where users can interact with virtual worlds, and education, offering immersive learning experiences that enhance comprehension and retention.

In contrast, AR enriches the real world by overlaying digital information onto the user's immediate environment, typically accessed through smartphones or AR glasses. This capability enhances everyday activities like navigation, allowing users to receive real-time directions or information about their surroundings. Industries such as retail benefit from AR by enabling virtual try-ons of products and personalized shopping experiences, while healthcare leverages AR for surgical planning and training simulations.

Both VR and AR continue to evolve rapidly, driven by advancements in hardware capabilities, software development, and user experience design. Challenges like motion sickness in VR and privacy concerns in AR are actively addressed through innovation. As these technologies become more accessible and integrated into various sectors, their potential to revolutionize how we work, learn, and interact is increasingly apparent. Embracing the possibilities of VR and AR requires not just technical innovation but thoughtful consideration of their societal impacts and ethical implications. The future promises a seamless blend of virtual and physical worlds, where VR and AR enhance our capabilities, redefine entertainment, and provide innovative solutions across industries, paving the way for a more immersive and interconnected digital era.



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*"Hardships often
prepare ordinary
people for an ex-
traordinary desti-
ny."*

— C.S. Lewis

THE IMPERATIVE OF CYBERSECURITY IN THE DIGITAL AGE

In today's interconnected world, cybersecurity is a critical concern for individuals, businesses, and governments. The rapid advancement of technology has introduced a myriad of cyber threats, compromising sensitive data, disrupting services, and causing financial losses. Key threats include malware, phishing, ransomware, denial of service (DoS) attacks, and advanced persistent threats (APTs).

Cybersecurity is vital for several reasons:

1. **Protecting Sensitive Data:** Safeguarding personal and financial information from unauthorized access.
2. **Maintaining Trust:** Ensuring customer confidence and protecting business reputations.
3. **Preventing Financial Loss:** Mitigating costs from theft, business loss, and recovery expenses.
4. **Ensuring Business Continuity:** Preventing operational disruptions and downtime.
5. **Protecting National Security:** Securing critical infrastructure against nation-state attacks.

Key components of effective cybersecurity include:

1. **Risk Assessment and Management:** Identifying and prioritizing vulnerabilities.
2. **Firewalls and Intrusion Detection Systems:** Monitoring and controlling network traffic.
3. **Encryption:** Protecting data by making it unreadable without decryption keys.
4. **Multi-Factor Authentication (MFA):** Adding layers of security for system access.
5. **Regular Updates and Patching:** Keeping software current to prevent exploits.
6. **Security Awareness Training:** Educating employees about cyber threats and safe practices.



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"Success is not final, failure is not fatal: It is the courage to continue that counts."

- Winston Churchill

UNLOCKING THE FUTURE: AI MONETIZATION

Introduction AI Monetization:-

In recent years, Artificial Intelligence (AI) has gone from a futuristic concept to a game-changer for businesses worldwide. As we head into 2024 and beyond, how AI is marketed rapidly changes, opening up new opportunities for growth and creativity. Many companies across different sectors are exploring how they can use AI to stay ahead. This includes things like AI as a Service, personalized AI-driven experiences, and making money from content created by AI.

With the growth of AlaaS platforms, companies may now access new capabilities more widely without requiring a large amount of equipment thanks to adaptable AI solutions. This change will help all businesses get better at what they do and make customers happier. With AI, companies can use real data to give customers more personalized experiences, which makes them like the brand even more. Using AI to create content can be both good and hard for businesses, especially in media and entertainment. AI can make amazing stuff, but there are problems with honesty and fairness. To keep customers happy, companies using AI for content should focus on doing it right and telling people what they're doing

Expansion of AI Monetization as a Service :

In 2024 and upcoming years, more businesses will use AI as a Service. This means they'll rely on companies that provide AI tools without needing to set up their own systems. These platforms offer things like machine learning and language processing through the cloud. By using AI Monetization as a Service, businesses can make customers happier, work better, and come up with new ideas, all without spending a lot upfront. For example, Google Cloud Translation API is a tool that helps developers build apps that can translate text between different languages. It's like having a smart language translator for your computer programs. This tool is really good at understanding and translating languages, and it can work with lots of different language combinations. It's easy for developers to use, works well with many programming languages, and can be used in various types of apps. Plus, it can translate text in real time, which means it's great for apps that need quick translations on the fly.

Rise of AI getting more personal:

AI is taking personalization in marketing to new levels and becoming essential for businesses. By 2024, we'll see even more advanced AI Monetization solutions used in many industries. AI algorithms analyze lots of data like how people behave and what they like to give personalized suggestions, offers, and content in real-time. This kind of personalization makes customers stick around and engage more with businesses. For example, AI Monetization generated Chatbots assist you at any time, any place with whatever problem, providing real-time solutions.

Conclusion

In summary, as we explore how AI Monetization can make money, there are lots of chances for those who want to try new ideas. Learning these skills...

1. Produce AI-driven skills
2. Apply AI to web design
3. Use AI to create online courses
4. Freelance code with AI
5. Become a product Affiliate



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"Don't judge each day by the harvest you reap but by the seeds that you plant."

— Robert Louis Stevenson

THE INTERSECTION OF MUSIC AND TECHNOLOGY: AI IN MUSIC CREATION

"The marriage of AI and music is not about replacing human creativity, but amplifying it."

The wonderful fusion of AI technology and music is the new game changer and is creating a whole new revolution in the way music is made in the new world. While music made this way can raise ethical questions but it opened up a whole new realm of possibilities for music composition and performances. To understand this intersection, we need to understand the basic work of AI in music which is to analyse styles and generate patterns much faster than humans can ever do.

Did you ever know that the most significant work of AI in music is composition, where we can feed the AI a single chord or a genre specification with parameters and it can generate a whole new piece of art within a few seconds?

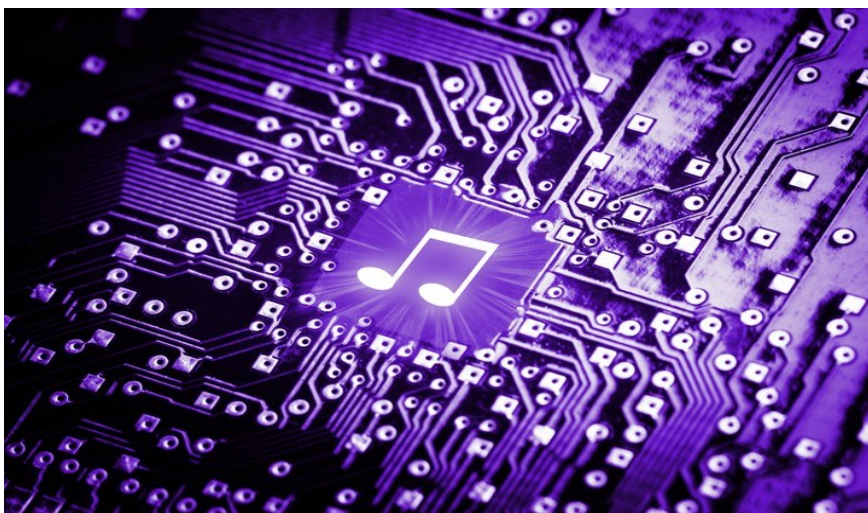
AI is not only revolutionizing the field of composition, but it also plays a vital role in producing music where it can mix and match thousands of tracks to create a new masterpiece which earlier required great effort and excellence creating a whole new perspective of making music in the market and jamming of the audiences to these new creations.

Altogether the music industry is experiencing a great shift due to AI, AI could saturate the market with all this content which is produced in the flick of a second and also raises a huge question of who owns this music which can result in copywriting issues and plagiarism. Also, human expression is at the heart of musical expression, raising the question of whether it can ever replicate the human touch.

The outcome will unfold in due course.



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"In the world of bits and bytes, every keystroke is a brushstroke shaping the future."

- Steve Jobs

THE EMERGENCE OF DIGITAL CELEBRITIES AS VIRTUAL INFLUENCERS SOCIAL MEDIA TRANSFORMATION

Virtual influencers are revolutionizing marketing and social media. They are digital creatures made possible by CGI and AI technologies. With their captivating personalities and impeccable aesthetics, these lifelike digital characters—Lil Miquela and Shudu, for example—captivate audiences and gain millions of followers.

Their control and predictability make them appealing, providing marketers with a creative, low-risk substitute for human influencers. Virtual influencers offer a consistent and trustworthy platform for brand communications since they are impervious to crises and personal controversies, unlike real ones. They are always accessible, producing content that speaks to their consumers outside of the bounds of human experience.

Virtual influencers are now more appealing because of their increased realism and interaction thanks to technological advancements. These digital characters allow for creative storytelling, enabling marketers to create intricate narratives and customized campaigns, in addition to being cost-effective by eliminating the need for payroll and logistics. Their exceptional capacity to fit in with digital settings creates new avenues for brand interaction.

Virtual influences are criticized, though, too. Since their contacts don't feel like real human interactions, questions regarding authenticity and openness come up. The ethical dilemma of striking a balance between innovation and integrity is posed by ongoing worries about using fictional characters to manipulate viewers.

The future is bright for virtual influencers in spite of these obstacles. They are anticipated to become increasingly incorporated into different digital platforms, such as virtual and augmented reality, as technology advances. The possibility of hybrid influencers, who combine human and virtual components, may improve engagement even more by providing a combination of digital and real world interactions.

In summary, virtual influencers are transforming the way that brands interact with consumers by offering regulated, creative, and affordable answers to contemporary marketing problems. Their ascent designates them as major participants in the future of digital engagement and heralds a revolutionary change in social media.



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"In the language of code, innovation speaks its own eloquent truth."
- Mark Zuckerberg

THE EVOLUTION AND TRENDS IN WEB DEVELOPMENT

The early days of this web development era are far behind, and now it's unacceptable to even consider something other than a dynamic, interactive website. In the beginning, only basic HTML, CSS, and rudimentary JavaScript were in use to construct a site – they were only good for offering minimal interactivity. With the rise of serverside technologies such as PHP, and ASP, and also with the help of content management systems like WordPress dynamic databasedriven websites were created. The widespread use of AJAX and certain frameworks like React and Angular has brought about web applications frontends that can quickly change content or react to user's input.

Presently, Single Page Applications (SpAs) give better user experiences by updating the content without refreshing the whole page. Progressive Web Apps (PWAs) permit the best of all aspects of web and mobile apps: they are offline capable and are delivering outstanding performance. Moreover, Serverless architecture, a technology solution that is server-free using the AWS Lambda infrastructure, allows for a scalable backend without server resource management, and Wasm technology, associated with WebAssembly, can boost the performance of demanding tasks.

AI and machine learning integration for personalized experiences, voice search optimization, better security measures, and AR/VR mixed-media devices leading to improved UX are seen as possible trends in the future. In line with technological developments, web developers are required to adapt their approaches if they aim to develop safe, effective, and appealing web user experiences.



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"You are the author of your own story."

- Dan Zadra

ETHICS IN TECHNOLOGY

In today's tech-savvy world, our gadgets are like digital playgrounds. But just like on a real playground, we need some rules to make sure everyone plays fair. That's where ethics in technology comes in, ensuring our online adventures are fun, safe, and respectful.

Privacy Please: Have you ever wondered why you suddenly see ads for the exact shoes you were talking about? It's not magic; it's your data at work. Companies track what we do online, but there's a fine line between helpful and creepy. Ethical tech means respecting our privacy and not sharing our data like its candy on Halloween.

Algorithm Antics: Algorithms are like invisible friends guiding our choices, from movie picks to job offers. But sometimes they get things wrong, like recommending you a cooking class when you're a terrible cook. Ethical tech ensures these algorithms are fair and don't discriminate, giving everyone a fair shot.

Cybersecurity Shenanigans: Ever clicked on a suspicious link and instantly regretted it? Cybersecurity is the superhero protecting our online world from hackers. Ethical tech means building strong defences to keep our personal info safe, like a digital fortress.

Tech Tips for Ethical Fun:

Privacy Settings: Check them like you check your selfies – regularly.

Strong Passwords: Make them hard to guess, like your weirdest inside joke.

So, next time you're online, remember: ethics in tech keeps our digital playground fun and fair for everyone. Let's tech responsibly and keep the giggles coming, no glitches allowed!



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*"The best way to
find yourself is to
lose yourself in
the service of
others."*

*-Mahatma
Gandhi*

EXPLORING THE FUTURE OF DRONE TECHNOLOGY

Drones are expected to be increasingly utilized across various sectors in the upcoming years due to advancements in technology and their versatility. Such as drones are used for monitoring crowds, traffics, illegal trafficking and drones are equipped with sensors and cameras to monitor the crop health, etc.

Many predict that by 2024 and 2025, drone usage will increase significantly due to emerging trends. Currently, photographers and videographers are the only industries using drones. However, trends indicate that soon enough, drone technology will become affordable enough for many individuals to wish to buy them. Additionally, they won't need to recharge because to advancements in technology, allowing them to fly for extended periods of time. In the upcoming years, drones do not need any approval from the government, meaning they might be utilized for more purposes. For example, current trends indicate that drones could be used more frequently to locate lost persons or animals. Drone deliveries of consumer products could also increase.



Additionally, drones could be incorporated into network gadgets. It is no longer even a future trend to connect and operate a drone remotely from a phone or other digital device. Distributed swarm drones may fly throughout neighborhoods and cities, delivering food, and other items. This makes space for new businesses, startups, and technological advancements to support this trend. A new wave of upcoming technology and businesses are also necessary for adoption.

To conclude, Drones are poised to play a vital role across numerous industries and applications in the coming years, transforming operations, improving efficiency, and enabling new possibilities in various sectors globally.



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"Happiness is when what you think, what you say, and what you do are in harmony."

*-Mahatma
Gandhi*



ARTICLES FROM OTHER COLLEGE

BLOCKCHAIN BEYOND CRYPTOCURRENCY

Blockchain is a digital ledger technology used to store data in a decentralized manner across a network of computers. It is also called a "chain" because every data block is linked to its previous data block using a mathematical code called a hash. This creates a linear sequence of data that is secured and unchangeable.

One of the benefits of blockchain in cybersecurity. It ensures data integrity and prevents tampering. An unbroken chain is created by linking each data block in the blockchain contains a cryptographic hash to its previous block. If anyone attempts to modify the data block, a different hash is required, thus immediately revealing the data is tampered. The data stored in the data block cannot be modified, thus the blockchain remains accurate and unaltered, protecting data against data breaches and unauthorized modifications. The decentralized and immutable blockchain-based ledger system, is ideal for tracking the movement of goods, securely sharing patients' records, optimizing financial management, and arranging for credible, verifiable voting procedures.

The permanent deletion of the middleman and the reinforcement of data accuracy provide a high level of security in various industries, opening up multidisciplinary opportunities in addition to cryptocurrency.

Blockchain increases supply chain access and accountability. Blockchain technology stores all transactions that involve a product. This helps in reducing the prevalence of fake products.

Supply chain finance may be used with blockchain technology to provide safe and transparent funding options based on real-time supply chain data. It has resulted in a decrease in risks, an expansion of accepted payment methods, and a rise in the total cost of finance for both buyers and suppliers.

In conclusion, the use of blockchain extends beyond cryptocurrencies to include advertising process transparency, which is a crucial component of maintaining competitive advantages and boosting cooperation between buyers and sellers. It is imperative to differentiate it based on attributes such as decentralization, immutability, transparency, security, and smart contracts, which are already causing waves in sectors like voting systems, healthcare, finance, and supply chain management.



Riya Dande
G.Narayanamma Institute Of
Technology and Science



"I believe you have to be willing to be misunderstood if you're going to innovate."

-Jeff Bezos

PLACEMENT INFORMATION

41 Students of UG are placed in different companies, like

- Verizon ,
- Deloitte ,
- Goldman Sachs,
- Regalix ,
- Synchrony Financial,
- ADP,
- We make Scholars,
- Kodem Technologies,
- Foundever,
- Colosseum,
- Sigma 9 Aerospace& Defence Research Center pvt ltd ,
- Coschool,
- Viveja IT Services Ltd,
- Energy Techglobe ,
- Lt Mind Tree in the academic year 2023-24.

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Dept.of Computer science

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DEPARTMENT OF COMPUTER SCIENCE

The department was established in 1988, an iconic year in the lifeline of St. Francis College as it marks the grant of autonomy to the college. Computer Science is an interdisciplinary field and it is as much about teaching and learning of computer science as it is about the areas that impact on computer science – mathematics, linguistics, natural sciences, psychology, philosophy and how they interrelate with the theory and practice of education. Highly qualified and dedicated teaching faculty supported by equally able and competent lab faculty are the strength of the department. The college has hi-tech state of the art computer labs with over 400 high end computer terminals facilitated with high-speed internet access and connected to Linux and Windows servers equipped with all the required licensed software.

The department offers an assortment of programs at the undergraduate level, M.Sc. Computer Science at the postgraduate level and CCNA certification course. While we believe man is still the most extraordinary computer of all, we endeavour to provide the best possible exposure and training to the students, making them strong to face the IT challenges of the world.

