

BITS & BYTES

2023-24

**EVENTS,
WORKSHOPS & TRAININGS**

**INDUSTRIAL
COLLABORATIONS**

**STUDENT
PROFESSIONAL
ASSOCIATIONS**

INTERNSHIPS

ACHIEVEMENTS

**ACADEMIC
INITIATIVES**

**STUDENT
ARTICLES**

**DEPARTMENT OF
INFORMATION
TECHNOLOGY**



APSIT

(NBA ACCREDITED)



DEPARTMENT OF INFORMATION TECHNOLOGY



PCT'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
SURVEY NO. 12, GHODBUNDER RD,
KASARVADAVALI, THANE WEST - 400615

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Principal's Desk



Dr. Uttam D. Kolekar
Principal

PhD (Electronics and Telecommunication Engineering)

I am delighted to announce the release of our institute's Department of Information Technology magazine, "Bits & Bytes," now in its seventh consecutive year. This publication is dedicated to realizing our primary vision: transforming students into globally competent IT professionals.

"Bits & Bytes" serves as an inspiration for both students and faculty to remain ambitious and aim for higher goals. By showcasing the achievements and innovations within our department, the magazine highlights the continuous pursuit of excellence that defines our community. We eagerly anticipate the successful journeys of our young aspiring engineers as they embark on their professional paths.

The dedicated efforts of the Editorial Board in producing this magazine are highly commendable. Their hard work and commitment have resulted in a publication that truly reflects the dynamic and forward-thinking nature of our department. I extend my heartfelt congratulations to the students and faculty on their accomplishments and wish them the best in their future endeavors.

We invite you to explore the latest edition of "Bits & Bytes" and join us in celebrating the achievements and aspirations of our vibrant IT community. Together, we look forward to a future filled with innovation, excellence, and success.

- Dr. Uttam D. Kolekar
Principal



Dr. Kiran Deshpande
HOD,
Department of Information Technology

With great pride, we present the latest edition of our IT Department magazine, "Bits & Bytes," highlighting the remarkable achievements of our students and faculty during the 2023-2024 academic year. Our students have made excellent use of academic initiatives, industry collaborations, and internships to enhance their skills. Their innovation is evident through notable successes like earning recognition in the IBM Hack Challenge 2023 and registering 11 copyrights for their BE projects.

Alongside technical excellence, we remain committed to nurturing moral values, ensuring our graduates are both skilled professionals and responsible citizens. The strong bond between students and faculty drives our department's progress and success.

I sincerely congratulate the Editorial Team for their dedication in bringing this edition to life and wish them continued success. We invite you to explore "Bits & Bytes" and celebrate our community's accomplishments as we move forward with confidence and inspiration.

- Dr. Kiran Deshpande
HOD,
Department of Information Technology.

INSTITUTE'S

VISION

APSIT aspires to be a premier institute producing globally competent engineering professionals to contribute towards socio-economic growth of India.

MISSION

To provide conducive and collaborative environment to meet contemporary & future Engineering challenges by project based and value-added education with the support of trained faculty.

DEPARTMENT'S

VISION

To be a prime center of excellence by transforming students into globally competent IT Professionals.

MISSION

M1: To develop, support and maintain state-of-art infrastructure to serve as a potent resource hub for the IT industries.

M2: To inculcate the problem solving, analytical, logical skills and to promote the culture of creativity and innovation among the students.

M3: To adapt with the transformation of the technology emphasizing on interdisciplinary studies, exposure to emerging technologies and imbibing high standards of professional ethics and social responsibilities in all endeavors.

Department Program Educational Objectives

PEO 1 PREPARATION: To make students competent for higher studies and employable, to meet industrial requirements.

PEO 2 CORE COMPETENCE: To develop students having core competence in science, mathematics and fundamentals of Information Technology to address everchanging industrial requirements globally.

PEO 3 BREADTH: To create academically conducive environment to learn engineering skills in the domains such as Database, Data Analytics, Application Development and Allied Technologies.

PEO 4 PROFESSIONALISM: To enrich students with professional ethics, leadership qualities, and entrepreneurial skills.

PEO 5 LIFE LONG LEARNING: An ability to engage in lifelong learning for effective adaptation to technological developments.

Department Program Specific Outcomes

Program Specific Outcomes

PSO1 To use modern computer languages, environments and platforms in creating innovative Carrier paths in the areas of database, data analysis and application development.

PSO2 To apply theoretical foundations of Information technology in developing solutions for engineering problems that meet automation needs of industry and society.

PSO3 To design and implement efficient real-time solutions using evolving knowledge of information technology by demonstrating the practices of professional ethics and the concern for societal and environment well being.



Department Infrastructure

Academic Infrastructure

- Air-Conditioned Classrooms and Tutorial Rooms equipped with touch interactive projection system
- Well-equipped Air-Conditioned Laboratories connected to Centralized Server Room.
- Media-Equipped Air -Conditioned Seminar hall.
- Online Departmental Library Management System.

Computational Facility

- Number of Computational Nodes available in Department: 300
- Number of Blade Server Systems: 05
- PC to Student ratio: 1:1.
- Dedicated leased line of Internet
- Wi-Fi Access & CCTV Surveillance.
- NVIDIA DGX workstation for AI & Data Science research.
- iOS Lab for cross platform application development

Highlights

- Use & accessibility of remote servers during laboratory sessions.
- E-Learning Facility with Moodle.
- Online Tests for Self Assessment.
- Virtual Classroom & Web Conferencing facility for Query Sessions.
- Authentication based Internet access and printing facility for students.
- Cloud Storage for Students.
- Online Lab assignments submission & assessment with feedback. (E-assessment).
- Online Academic Feedback Facility for Students.
- Lab availability for students after academic hours.
- Expert Talks, Value addition Programs & Project Based Learning.
- Student Technical Clubs like Cybersecurity, AI & ML, DevOps for collaborative learning.
- Online Mentoring Portal.
- Free GATE, GRE and Pre-Placement Training.
- E-books through Pearson, Tata Mcgraw Hill, Online Library.

Student Achievement



Results for A.Y. 2023-24

ODD Semester

SE IT

Name	CGPA
Omkar Sawant	9.74
Maithili Chalke	9.61
Omkar Chandangaonkar	9.48
Paresh Gupta	9.35
Varad Mahale	9.35

TE IT

Name	CGPA
Sumit Mesta	9.87
Shweta Bhutada	9.61
Tanaya Kulkarni	9.61
Mrunmayi Joshi	9.61
Vinayak Sharma	9.61

BE IT

Name	CGPA
Subhashish Mahapatra	9.45
Om Chavan	9.45
Devanshu Mahapatra	9.32
Nainisha Sharma	9.32
Athul Nair	9.32

Results for A.Y. 2023-24

Even Semester

SE IT

Name	CGPA
Pawan Walke	10
Omkar Sawant	9.87
Omkar Chandangaonkar	9.61
Chinmayee Sadalgekar	9.61
Maithili Chalke	9.48

TE IT

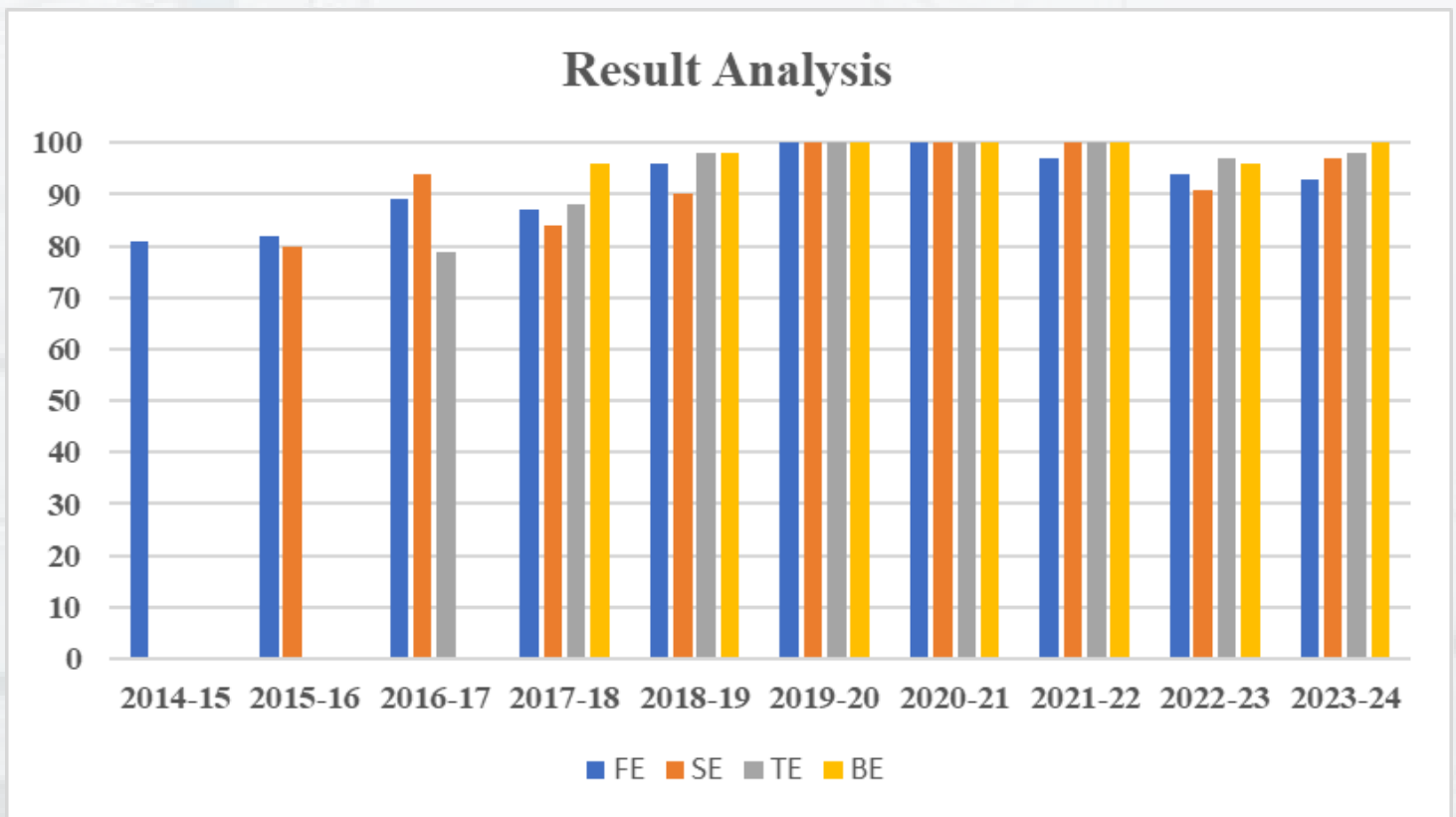
Name	CGPA
Avisha Shah	9.64
Vinayak Sharma	9.59
Prakruti Bhavsar	9.32
Abdul Shah	9.32
Shivani Zagade	9.32

BE IT

Name	CGPA
Vinayak Somvanshi	10
Jayesh Singh	10
Pratham Pise	9.85
Gandharvi Walavekar	9.70
Nishank Jain	9.55

Result Analysis

As a premium institute we are providing our students with complete ecosystem for their overall development. Along with this we keep on enhancing the teaching learning processes continuously by bringing in latest technology and trends. This all can be realized through excellent performance by our students in university examination.



Testimony

Any department is said to thrive when the faculty and the students produce results that are visible. We honor the academic achievements of students, who have excelled in their endeavors and we are immensely proud of their success. This has been possible because of smart, innovative teaching methodologies augmented with time intensive planning & efforts put in by Faculties & students.

- Prof. Yaminee Patil, Exam Coordinator.

Technical

(Course Completion Statistics through Industrial Collaborations)

Red Hat Academy

Course name

Course Completion Statistics

- DO101(Introduction to openshift applications)
- DO180(Red hat openshift I: Containers & Kubernetes)

60

50

Oracle Academy

Course Name

Course Completion Statistics

- Java Foundation
- Database Foundation

156

132

Cisco Networking Academy

Course name

Course Completion Statistics

- CPA: Programming Essentials in C++
- Cyber Security Essentials
- Big Data Analytics

145

131

88

HackerRank

Course Name

Course Completion Statistics

- Problem Solving Basic Course

199

Technical

Research Publications

To inculcate research culture among-est students, Department has develop ecosystem to ensure publication of their BE project work in reputed International conference and Journals

Title of the Project	Name of the Student	Name of the conference
CodeSynth: A comprehensive AI-driven plugin for navigating python programming with contextual insights and resolutions	Devanshu Mahapatra Nishank Jain Athul Nair Subhashish Mahapatra	Springer-Doctoral Symposium on Computational Intelligence
Ur's Corporator - Innovating citizen corporator interaction through ML enabled comprehensive web framework	Kalpesh Chavan Ankit Awade Sampada Mahadik	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Unlocking Professional Potential: An advanced AI enabled career counseling system for informed career Decisions	Parthavi Khatu Rohin Ambati Karan Maurya	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Comprehensive certificate validation & verification system for educational institute using blockchain	Sakshi Balekar Sarthak More Prathamesh Lambate Jaykumar Nayi	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Enhancing suspect identification: Automated composite sketch generation and recognition	Jemin Bhanushali Kritika Donde Disha Panchal	Springer-Doctoral Symposium on Computational Intelligence
ML-Powered comprehensive web framework for centralized medical records management and precise health insights	Purvesh G. Rahul Patil Ambadas M. Om Chavan	Springer-Doctoral Symposium on Computational Intelligence

Technical

Research Publications

Title of the Project	Name of the Student	Name of the conference
DestinAI: Your personalized travel itinerary planner and chat catalyst using generative AI	Aaswit Kanhed Kunal Palande Pratham Bhagwat Nishant Palav	Springer-International Conference on Information and Communication Technology for Intelligent Systems
EnviroWatch: A comprehensive environmental monitoring web framework and cleanup coordination platform	Madhu Gage Darpan Mhatre Rohan Ahire Chirag Kadam	Springer-Doctoral Symposium on Computational Intelligence
Petree: An ML-based comprehensive framework for pet care	Mitali Chaudhari Sakshi Parab Shreyash Ghute	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Varistha Rakshak: An AI-based comprehensive web framework for ensuring senior citizen care in real time	Shivam Gupta Yashab Mahimi Rupesh Mishra Meet Bohra	Springer-International Conference on Intelligent Computing and Communication
AIRecruitHub: An AI based recruitment web framework for bridging talent and opportunity	Soham Bolla Sakshi Ahire Sakshi Gaikwad	Springer-Doctoral Symposium on Computational Intelligence
Comprehensive blockchain, AI based web framework for digital health record management	Ashmina Dangat Sakshi Gunjal Neha Chaudhary Anusha Gondhalekar	Springer-International Conference on Information and Communication Technology for Intelligent Systems
ChatApsit: Generative AI based comprehensive web Framework for an Educational Institute	Aryan Amin Mayur Jain Madhur Dukhande Kaushal Nikam	Springer-International Conference on Intelligent Computing and Communication

Technical

Research Publications

Title of the Project	Name of the Student	Name of the conference
FitGeek: Modelling ML based recommendation system for fitness and wellness	Shreya Mahajan Saniya Dutta Anish Bhosale	Springer-International Conference on Advanced Communication, Energy and Big Data
Precise AI-Driven cattle identification and classification system	Suraj Singh Himanshu Rane Atharva Takle Tanmay Poyekar	1. IEEE International Conference for Convergence in Technology 2. Springer International Conference on Information and Communication Technology for Intelligent Systems
Developing comprehensive blockchain enabled webframework for evidence management	Atharv Sathe Jayesh Singh Harsh Yadavade Ritvik Shetty	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Comprehensive blockchain-based cross-platform application for roadside assistance	Vinayak S. Gandharvi W. Kevin Thakkar Yogesh Kumbhar	Springer- World Congress on Information and Communication Technologies
Mental wellness compass for aspiring Engineers	Pooja Sharma Nainisha Sharma Disha Bendale Mayur Shinde	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Building comprehensive web framework addressing learning disability using machine learning and computer vision	Mihir Shrivastava Pranil patil Bhushan patil Tanishq sahane	Springer-Doctoral Symposium on Computational Intelligence
Sound secret audio crypt -LSB based audio steganography using RSA	Yash Umredkar Aryan Sankholkar Jill Shah Swapnil Sawant	Springer-Doctoral Symposium on Computational Intelligence

Technical

Research Publications

Title of the Project	Name of the Student	Name of the conference
Web Sculptor - Generative AI based comprehensive web development framework	Snehi Ratani Dhananjay Phalke Nihal Varun Disha Phatta	IEEE-International Conference on Computing, Power and Communication Technologies
Modeling scalable lab environment for academia through kubernetes cluster	Pratham Pise Hitesh Sachdev Aman Yadav Raj Solkar	Springer-Doctoral Symposium on Computational Intelligence
Rural India healthcare revolution: Blockchain based medicine supply chain	Aditya Waingade Aagya Singh Sahil Vishwakarma Devesh Zope	Springer-International Conference on Advanced Communication, Energy and Big Data
Comprehensive AI driven web framework for automating recruitment process of IT industry	Pratik Pandit Rohan Bait Jai Rao Jateen Tirlotkar	Springer-International Conference on Information and Communication Technology for Intelligent Systems
ML based comprehensive framework for stock prediction.	Sahil Shetty Srusti Patil Sakshi Thorbole Riya Sawant	Springer-Doctoral Symposium on Computational Intelligence

Technical

Intellectual Property Rights

The final year B.E. students have successfully obtained software copyright for their project, thereby officially registering their original work and securing intellectual property rights under the Copyright Act. This achievement not only recognizes their technical innovation and programming effort but also empowers them with legal ownership of their software.

Title of the Project	Name of the Student	Copyright/ Patent Registration
Ur's Corporator - Innovating citizen corporator interaction through ML enabled comprehensive web framework	Kalpesh Chavan Ankit Awade Sampada Mahadik	Copyright Registered
Comprehensive web framework for an educational institute to generate student profile by using ML & generative AI	Avinash Andhale Prathmesh Naik Vishnikant Mule	Copyright Registered
Comprehensive certificate validation & verification system for educational institute using blockchain	Sakshi Balekar Sarthak More Prathamesh L. Jaykumar Nayi	Copyright Registered
EnviroWatch: A comprehensive environmental monitoring web framework and cleanup coordination platform	Madhu Gage Darpan Mhatre Rohan Ahire Chirag Kadam	Copyright Registered
Comprehensive blockchain, AI based web framework for digital health record management	Ashmina Dangat Sakshi Gunjal Neha Chaudhary Anusha G.	Copyright Registered
Hierarchical navigable small worlds with K-Means clustering for efficient vector database manipulation	Gulshan Yadav Rahul Kumar Y. Mayank V. Mansi Viramgama	Copyright Registered

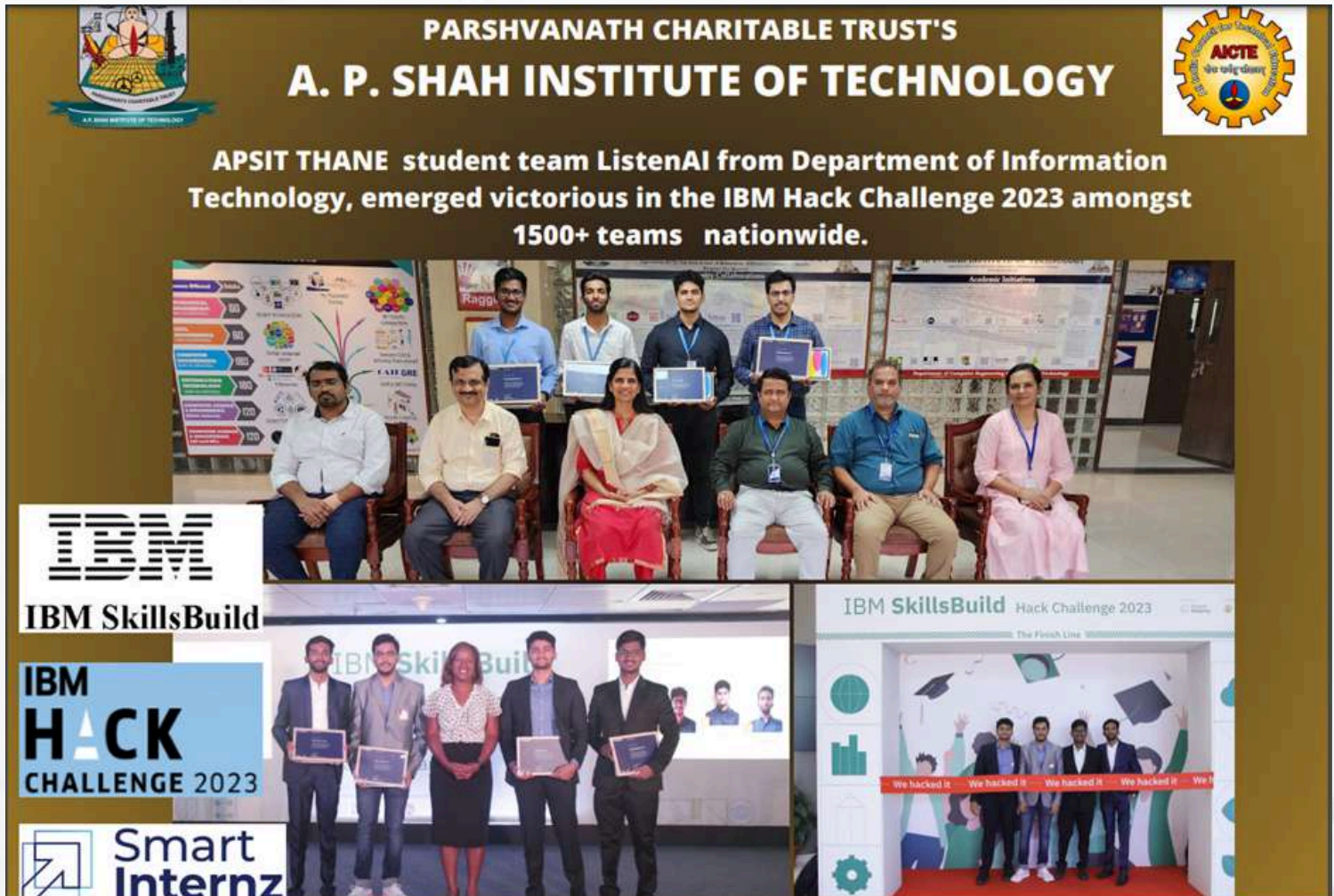
Technical

Intellectual Property Rights

Title of the Project	Name of the Student	Copyright/ Patent Registration
Developing comprehensive blockchain enabled web framework for evidance management	Atharv Sathe Jayesh Singh Harsh Yadavade Ritvik Shetty	Copyright Registered
Comprehensive blockchain-based cross-platform application for roadside assistance	Vinayak S. Gandharvi W. Kevin Thakkar Yogesh Kumbhar	Copyright Registered
Web Sculptor - Generative AI based comprehensive web development framework	Snehi Ratani Dhananjay Phalke Nihal Varun Disha Phatta	Copyright Registered
Kisaan Dost:A comprehensive ML and IoT based web framework for Smart agricultural	Adarsh Singh Kanan Sananse Shruti Pinjarkar	Copyright Registered
VitalGuard: IoT based remote health monitoring system for senior citizens	Vaishnavi Shinde Akash Patil Sania Mane Adarsh Rai	Copyright Registered

Student Achievement

APSIT THANE student team Listen AI from Department of Information Technology, emerged victorious in the IBM Hack Challenge 2023 amongst 1500+ teams nationwide



Internship statistics:

- o 364 students have successfully completed AICTE virtual internship in various technical domains.
- o 31 students successfully completed industrial internship.

Student Achievement

APSIT Thane teams from Department of Computer Engineering & Information Technology emerged victorious in Smart India Hackathon 2023 conducted by Ministry of Education, Gov of India & AICTE. It's an impressive feat considering the high level of competition with over 44,000 teams and 50,000+ ideas.



PARSHVANATH CHARITABLE TRUST'S A. P. SHAH INSTITUTE OF TECHNOLOGY



APSIT Thane teams from Department of Computer Engineering & Information Technology emerged victorious in Smart India Hackathon 2023 conducted by Ministry of Education, Gov of India & AICTE. It's an impressive feat considering the high level of competition with over 44,000 teams and 50,000+ ideas.



शिक्षा मंत्रालय
MINISTRY OF
EDUCATION



रसायन एवं
उर्वरक मंत्रालय
MINISTRY OF
CHEMICALS
AND FERTILIZERS



MHRD'S
INNOVATION CELL
(GOVERNMENT OF INDIA)



Student Achievement

Mr. Yash Umredkar, Mr. Atharva Sathe and Ms. Vaishnavi Bhalerao BEIT students have successfully achieved prestigious global certification, EC Council's CEH (Certified Ethical Hacker).

PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY

Congratulations
For Successfully Completing Prestigious IT Certification

Yash Umredkar **Atharv Sathe** **Vaishnavi Bhalerao**

CEH Certified Ethical Hacker

DEPARTMENT OF INFORMATION TECHNOLOGY, APSIT THANE **EC-Council**

Palo alto Cybersecurity Academy

Course name

- Palo alto cybersecurity Fundamental

Course Completion Statistics

51

Student Achievement

Mr. Manish Kumar, Mr. Amit Pandey and Mr. Rajan Khade have cracked GATE 2023 and Manish Kumar have secured AIR (all India rank) 352 in Computer Science Paper.



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY



GATE 2023

All India Rank Holders



Rajan Khade



Amit Pandey

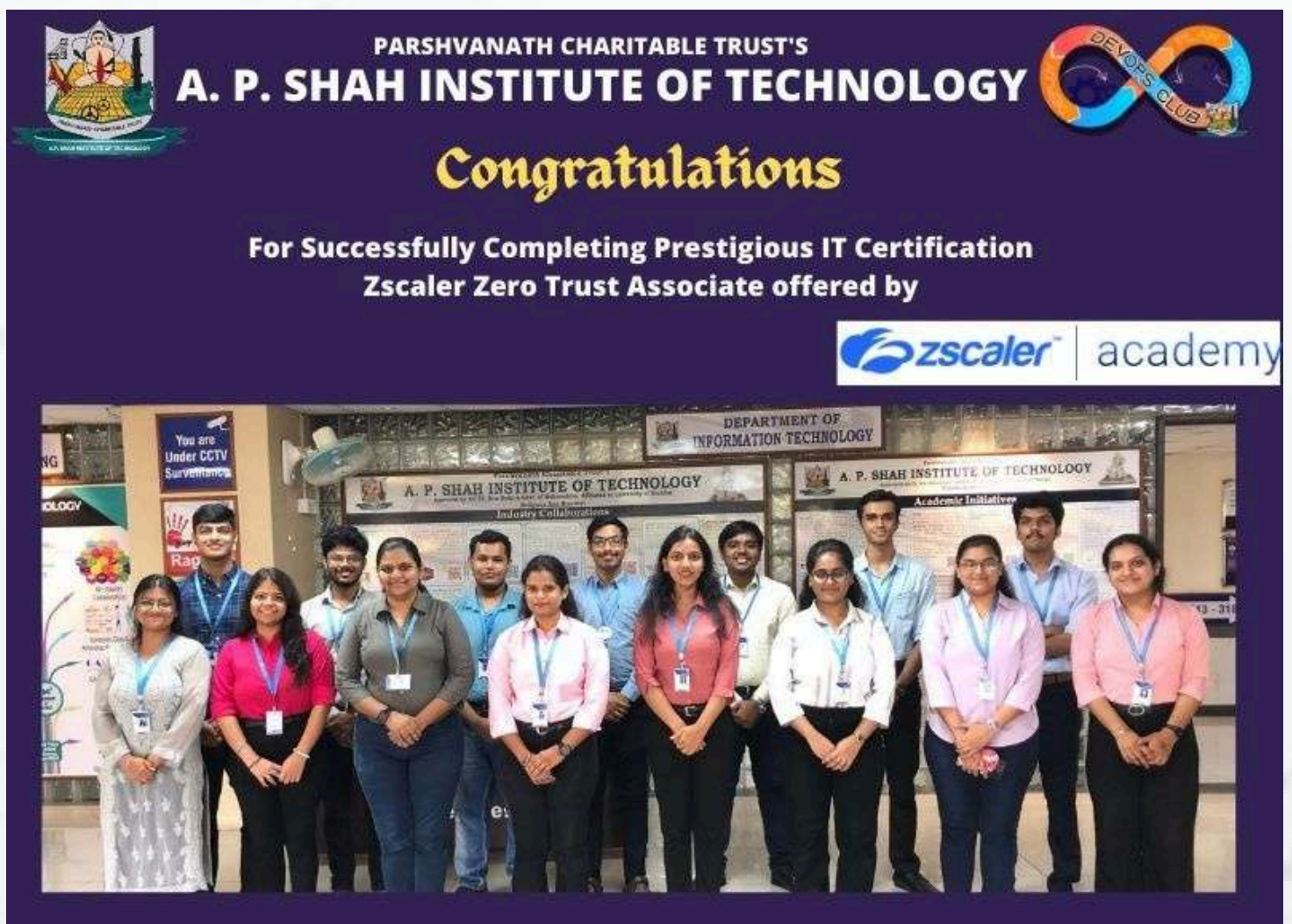


Manish Kumar

Congratulations...

Student Achievement

43 students from Department of Information Technology have been successfully completed Zscaler Zero Trust Associate global certification.



Student Achievement



Data Base Management System

Name of Student	Certificate Type
Nitesh Rakesh Soni	Successfully completed
Amit Rajgore	Successfully completed
omkar sawant	Successfully completed
Rushikesh Nachare	Successfully completed
Shravani Sawant	Elite
Shivam Sharma	Successfully completed
TANVI PAWAR	Successfully completed
Nitin Vishwakarma	Elite
Vivek Thorat	Successfully completed
Yash Apte	Successfully completed
Anjali Singh	Successfully completed
Atharva Shibe	Successfully completed
Chinmayee Sadalgekar	Successfully completed
Bhavesh Marathe	Elite
Rushikesh Davane	Successfully completed
Swayam Shah	Successfully completed

Software Engineering

Name of Student	Certificate Type
Shreyash Pawar	Successfully completed
Adarsh Pandey	Successfully completed
Kaushik Rajesh Prabhu Nerurkar	Successfully completed
Amogh Mahesh Parulekar	Successfully completed

Student Achievement



Data Structure And Algorithms Using Java

Name of Student

Rahul Sharma

Certificate Type

Successfully completed

Introduction to Automata, Languages and Computation

Name of Student

Bhavesh Arjun Marathe
KURLE SANKET SHARNAPPA

Certificate Type

Elite+Silver
Successfully completed

The Joy of Computing using Python

Name of Student

Mustqem Masuldar
KURLE SANKET SHARNAPPA
Shravani Sawant
Yash Apte
Chetan Prashant Nevrekar
Dhruv Nilesh Mahyavanshi
Mayank Mishra
Amit Rajgore
Om Madhavi
Shreyash Prashant Narvekar

Certificate Type

Successfully completed
Successfully completed
Successfully completed
Successfully completed
Successfully completed
Elite+Silver
Elite+Silver
Elite
Successfully completed
Successfully completed

Student Achievement

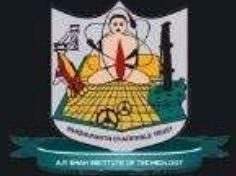


Spoken Tutorials

Year of study	Course	Course Completion Statistics
SE IT	Linux	125
	Java	139
TE IT	Python	177
	Drupal	86
BE IT	Joomla	118
	Latex	101

Ojus 2023: Annual Sports Meet

Ojus 2K3 :Annual Sports Meet



Ojus 2023: Annual Sports Meet



Ojus 2K3:
Annual
Cultural
Fest



Faculty Achievement



Technical



Mr. Vishal Badgujar

Mr. Vishal Badgujar have completed Microsoft Azure AI fundamentals, Microsoft cloud fundamentals, Oracle Certified Foundations Associate & Oracle Certified Associate global certification successfully. He was also appointed as section editor of computer software and media publication.



Technical



Ms. Jayshree Jha

·Ms. Jayshree Jha have successfully completed Juniper Network Certified Associate global certification.



Technical

5 of IT faculties have successfully completed IBM Build-A-Thon 2023 in diverse futuristic domains such as AI ML, Data Science & Analytics, Cloud App Development, and Cyber Security. Their commitment to staying at the forefront of technology is truly commendable.



Research Publications

Name of Guide and Co-Guide	Title of the Project	Name of the conference
Dr. Kiran Deshpande Ms.Charul Singh	CodeSynth: A comprehensive AI-driven plugin for navigating python programming with contextual insights and resolutions	Springer-Doctoral Symposium on Computational Intelligence
Ms. Geetanjali Kalme	Ur's Corporator - Innovating citizen corporator interaction through ML enabled comprehensive web framework	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Mr. Mandar A. Ganjapurkar	Unlocking Professional Potential: An advanced AI enabled career counseling system for informed career Decisions	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Mr. Mandar A. Ganjapurkar	Comprehensive certificate validation & verification system for educational institute using blockchain	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Mr. Ganesh Gourshete	Enhancing suspect identification: Automated composite sketch generation and recognition	Springer-Doctoral Symposium on Computational Intelligence
Dr. Uttam Kolekar, Ms. Syed Shafaque	ML-Powered comprehensive web framework for centralized medical records management and precise health insights	Springer-Doctoral Symposium on Computational Intelligence

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Ms. Rujata Chaudhari	Petree: An ML-based comprehensive framework for pet care	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Mr. Vishal Badgujar	Varistha Rakshak: An AI-based comprehensive web framework for ensuring senior citizen care in real time	Springer-International Conference on Intelligent Computing and Communication
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Mrs. Randeep Kahlon	FitGeek: Modelling ML based recommendation system for fitness and wellness	Springer-International Conference on Advanced Communication, Energy and Big Data
Dr. Kiran Deshpande Ms.Sneha Dalvi	Precise AI-Driven cattle identification and classification system	1. IEEEInternational Conference for Convergence in Technology 2.Springer International Conference on Information and Communication Technology for Intelligent Systems
Ms. Manjusha Kashilkar	Developing comprehensive blockchain enabled webframework for evidance management	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Ms. Neha Deshmukh	Comprehensive blockchain-based cross-platform application for roadside assistance	Springer- World Congress on Information and Communication Technologies
Ms. Yaminee Patil	Mental wellness compass for aspiring Engineers	Springer-International Conference on Information and Communication Technology for Intelligent Systems

Research Publications

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Ms. Manjusha Kashilkar	Sound secret audio crypt -LSB based audio steganography using RSA	Springer-Doctoral Symposium on Computational Intelligence
Ms. Anagha Aher	Web Sculptor - Generative AI based comprehensive web development framework	IEEE-International Conference on Computing, Power and Communication Technologies
Ms. Anagha Aher	Modeling scalable lab enviroment for academia through kuberneties cluster	Springer-Doctoral Symposium on Computational Intelligence
Prof. Apeksha Mohite	Rural India helathcare revolution: Blockchain based medicine supply chain	Springer-International Conference on Advanced Communication, Energy and Big Data
Ms. Jayshree Jha	Comprehensive AI driven web framework for automating recruitment process of IT industry	Springer-International Conference on Information and Communication Technology for Intelligent Systems
Mr. Sachin S. Kasare	ML based comprehensive framework for stock prediction.	Springer-Doctoral Symposium on Computational Intelligence



PROFESSIONAL STUDENT ASSOCIATIONS

IEEE

Institute of Electrical and Electronics Engineers



Exploring Innovation and Knowledge: IEEE APSIT Student Branch's Inspiring Journey
IEEE APSIT Student Branch embarked on a journey of innovation and collaboration with its inaugural ceremony on August 10, 2022, at A. P. Shah Institute of Technology's seminar hall. The event commenced with Principal Dr. Uttam Kolekar's warm address, setting a spirited tone for the IEEE ExeCom induction. Rakshit Shah, assuming leadership, illuminated the significance of IEEE, fostering enthusiasm among attendees.

Highlighting the event was the oath-taking ceremony, symbolizing dedication to knowledge and community. The allocation of executive roles and a group photograph concluded the ceremonious occasion, reinforcing unity and purpose among members. Following spirited discussions and guidance from faculty, the event concluded with a renewed sense of responsibility among its participants.

Continuing its trajectory, IEEE APSIT Student Branch hosted a series of enlightening events, including Hacktoberfest and a session on 'Fundamentals of Open AI'. Led by industry experts and supported by CSI APSIT and ITSA APSIT, these sessions explored cutting-edge technologies, drawing active participation and fostering learning.

A standout event was the "Matter Mind" session in February 2023, delving into quantum computing's transformative potential led by Prathamesh Hambar, the session demystified complex concepts, from qubits to quantum algorithms, and showcased real-world applications across sectors.

The success of these initiatives underscores IEEE APSIT Student Branch's commitment to nurturing curiosity and innovation, paving the way for future technological advancements. With each event, the organization continues to inspire and empower its members, ensuring a dynamic learning environment that prepares them for the challenges ahead.

CSI

Computer Society of India



Throughout the academic year, the A. P. Shah Institute of Technology has been a hub of innovation and learning, hosting a series of dynamic events organized by the esteemed Computer Society of India (CSI). These events have not only enriched the educational experience of students but also reinforced the institute's commitment to fostering a culture of excellence in technology and beyond.

The CSI events at A. P. Shah Institute of Technology serve as catalysts for exploration and discovery across a spectrum of technological disciplines. Each event is meticulously curated to provide students with opportunities to engage, learn, and excel in their chosen fields, while also encouraging interdisciplinary collaboration and professional growth.

One of the hallmarks of CSI events at A. P. Shah Institute of Technology is their diversity in content and focus. From technical workshops on software development, cybersecurity, and data analytics to seminars on emerging trends like artificial intelligence and blockchain, these events cater to a wide range of interests and career aspirations among students.

CSI

Computer Society of India



Sr. No.	Title of Expert Talk	Date
1	Building Real-Time Network Applications with Socket API	29 Mar 2024
2	Cloud Native OS- Powering Distrubuted Computing Infrastructure	18 Mar 2024
3	Shift Register Counters and applications of Flip flops	12 Feb 2024
4	Portfolio Using Angular 8	12 Mar 2024
5	Driving Decision with PowerBI: The Art of Data Visualization	5 Mar 2024
6	Poster Presentation on Green IT	18 Mar 2024
7	Efficient Software Project Management: Integrating Energy Conserving Practices	28 Mar 2024
8	Exploring the esesntial of Postman: API Testing & Development	4 Apr 2024
9	Understanding Importance of Forensic report generation after investigation	5 Feb 2024
10	Unlocking the power of Blockchain: A deep dive session	5 Apr 2024
11	Python Application using Flask on Cloud	5 Apr 2024
12	Exploring different cloud services of Microsoft Azure	4 Apr 2024

CSI

Computer Society of India



Sr. No.	Title of Expert Talk	Date
1	Roadmap to BE Major project selection	11 Jul 2023
2	Disaster Management in Infrastructure Security	9 Oct 2023
3	Infrastructure Security Testing Tools	29 Aug 2023
4	Unleashing the potential of test automation in software development	9 Aug 2023
5	Exploring Database Operations through AP	25 Aug 2023
6	Automation and Private Cloud using Red Hat Technologies by RHA	10 Aug 2023
7	Linux Automation with Ansible	11 Aug 2023
8	Containerized App Development	17 Aug 2023
9	The alumni perspective : A Roadmap to Career Excellence"	3 Oct 2023
10	LaTeX Unleashed:mastering the Art of Elegant Project Report Creation	12 Oct 2023
11	Data Science Wizard Hack Challenge	1 Aug 2023

CSI

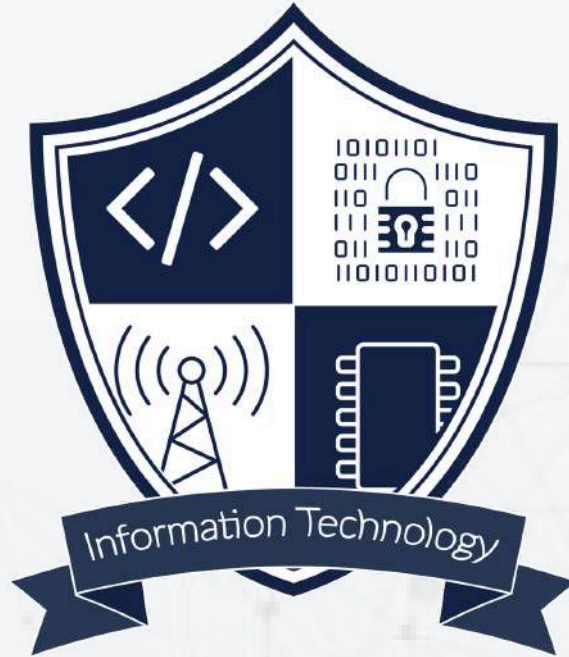
Computer Society of India



Sr. No.	Title of Expert Talk	Date
1	Machine Learning Unveiled: Easy Steps for New Learners	23 Jan 2024
2	How to Write Research Paper	17 Jan 2024
3	Importance and process of Copyright, Patent, Publication for undergraduate Projects	17 Jan 2024
4	Roadmap to Cybersecurity	18 Mar 2024
5	Decoding the Interview Lanes	19 Mar 2024
6	Overview of DevOps Lifecycle	20 Mar 2024
7	The View beyond Comfort Zone	21 Mar 2024

ITSA

IT Students Association



The IT Student Association (ITSA) at APSIT recently hosted a series of impactful events aimed at nurturing entrepreneurial spirit among students. On February 17, 2023, Harsh Mavadiya, founder of ByExpertise and a distinguished SE-IT student, led a session focused on effectively proposing and developing business ideas. Harsh's practical examples and emphasis on innovation as a driver for startups resonated well with attendees from both IT and mechanical departments, who actively participated in pitching their concepts.

Following this, ITSA introduced the Business Month initiative, comprising sessions on idea proposal, entrepreneurial mindset development, and a final pitch event. The PitchFest, held on March 10th and 17th, showcased diverse student teams presenting before a review panel including Dr. Sameer Nanivadekar, Dr. Kiran Deshpande, and other esteemed faculty members. Their insightful feedback and guidance helped refine student proposals, with Aryan Kumar from TE-Computer department winning first prize for his functional concept.

ITSA

IT Students Association



Sr. No.	Title of Expert Talk	Date
1	Mini Project Roadmap: Journey to Java	1 Sep 2023
2	Mini Project Roadmap: Web Craft	23 Aug 2023
3	The alumni perspective : A Roadmap to Career Excellence"	3 Oct 2023
4	Discover Python: An Introduction to Programming	19 Jan 2024
5	Crafting Visual Experiences: A Journey into GUI Development with Python	5 Feb 2024
6	Machine Learning Unveiled: Easy Steps for New Learners	25 Jan 2024
7	Roadmap to Cybersecurity	18 Mar 2024
8	Decoding the Interview Lanes	19 Mar 2024
9	Overview of DevOps Lifecycle	20 Mar 2024
10	The View beyond Comfort Zone	21 Mar 2024

ITSA

IT Students Association



A. P. Shah Institute
of Technology

ITSA 23-24



Department of
Information Technology



Manas Tare
ITSA Vice-President



Athul Nair
ITSA President



Dhruv Trivedi
ITSA Secretary



Shweta Bhutada
Student Head T&P



Vedangi Patil
Student Head CSI

ITSA

ITSA is Information Technology Students Association which works for development of every individual associated. It also give opportunity & platform to everyone for uplifting their skills.



Yukti Ogare
Student Co-Head T&P



Shivani Zagade
Student Co-Head CSI

T&P Cell

Training & Placement Team helps students in getting industry exposure through Industrial Visits. It also helps students to enhance their technical expertise through various Value Addition Programs on Futuristic Technologies.

CSI

CSI is Computer Society of India which helps in bridging gap between Industry & Academics by providing opportunities to students through various technical workshops & seminars.

CLUBS

APSIT's DevOps Club



DevOps club serves as a hub of innovation and collaboration, embodying the very essence of modern software development practices. DevOps isn't merely a methodology; it's a transformative approach that unifies development and operations, forging a path towards seamless integration and uninterrupted delivery. Through a series of hands-on workshops and expert talk sessions, we empower our members with practical skills and profound knowledge. These interactive sessions provide a unique opportunity to dive deep into the latest tools and methodologies that drive the DevOps revolution. By embracing automation, continuous monitoring, and iterative improvements, we expedite the delivery of top-notch software while ensuring its reliability.

CLUBS

APSIT's DevOps Club

The speakers elaborated on the automation tools and practices crucial for streamlining tasks, enhancing efficiency, and minimizing errors in modern IT environments. The core focus of the webinar was the deployment of private clouds using Red Hat technologies. Students gained insights into Red Hat's solutions for building, managing, and scaling private cloud infrastructures, fostering a deeper understanding of cloud computing principles.

The webinar showcased Red Hat OpenShift, illustrating its role in container orchestration. Students learned how OpenShift simplifies the deployment and management of containerized applications, providing a seamless experience for developers.

Sr. No.	Title of Expert Talk	Date
1	Infrastructure Security Testing Tools	29 Aug 2023
2	Unleashing the potential of test automation in software development	9 Aug 2023
3	Automation and Private Cloud using Red Hat Technologies by RHA	10 Aug 2023
4	Linux Automation with Ansible	11 Aug 2023
5	Redhat Openshift skills	25 Aug 2023
6	Exploring different cloud services of Microsoft Azure	4 Apr 2024
7	Overview of DevOps Lifecycle	20 Mar 2024

CLUBS

APSIT's Cybersecurity Club

Empowering Cyber Security Enthusiasts: The APSIT Cyber Security Students Expert Club

Cyber Security remains a dynamic frontier in Information Technology, with threats constantly evolving in the digital age. Hackers exploit vulnerabilities in individuals, governments, and corporations, making cybersecurity expertise invaluable. Recognizing this, APSIT has fostered a robust research culture through the Cyber Security Students Expert Club, encouraging students to explore this critical domain and interact with peers sharing similar interests.

The club recently hosted Ms. Shreya Bhutada, an APSIT alumna pursuing MS in Cybersecurity Risk Management at Indiana University Bloomington. Her insights underscored the global demand for cyber security professionals across sectors like banking, government, and retail. Additionally, Mr. Swapnil Bodekar, Product Security Associate at SAP Lab India, conducted a workshop on system defense strategies, emphasizing tools like Burp Suite and ZAP for vulnerability testing.

Furthermore, Mr. Bhaktij Koli, a Full Stack Developer, introduced open-source security tools and Mr. Yash Umredkar discussed social engineering attacks. The club also organized a webinar on next-gen firewalls with industry experts from Palo Alto Networks, highlighting career opportunities and certifications like PCCET aligned with cybersecurity frameworks.

APSIT's Cyber Security Students Expert Club equips students with practical skills and knowledge essential for thriving in the cybersecurity landscape, preparing them for impactful careers safeguarding digital infrastructures.

CLUBS

APSIT's Cybersecurity Club



Sr. No.	Expert Talk/Hand on Training	Date
1	Cybersecurity Awareness Program	18/08/23
2	Factor Influencing usability in Search Engine	27/09/23
3	Exposure to Digital & Cyber Forensics	05/02/24

A hand-drawn illustration on a textured, light-colored background. At the top center, the word "INTERNSHIP" is written in a bold, blocky, sans-serif font with a hatched texture, enclosed within a hand-drawn cloud shape. Surrounding the cloud are various colorful, hand-drawn icons: a glowing yellow lightbulb with a finger inside, a network diagram with green and orange nodes, a bar chart with four bars of increasing height, an open book, a pie chart with one slice highlighted, a target with an arrow in the bullseye, a circular flow diagram with a dollar sign and arrows, a calculator, and several other smaller icons like arrows and a cloud. A hand is visible in the center, with the index finger pointing upwards towards the word "INTERNSHIP".

INTERNSHIP

INTERNSHIPS

Internship Details of

A.Y. 2023-24

Sr No	Student Name	Name of organization where internship is done	Starting Date	Ending Date
1	Subhashish Mahapatra	Stockholding corporation of india ltd.	24 May 2023	7 Oct 2023
2	Devanshu Mahapatra	Primetals Technologies India Private Limited	6 Jan 2023	14 Jul 2023
3	Devanshu Mahapatra	Ambilio Technologies	19 Jun 2023	9 Apr 2023
4	Saniya Dutta	Scitara DLX	6 Jan 2023	21 Jul 2023
5	Subhashish Mahapatra	Stockholding Corporation of India ltd.	22 May 2023	7 Oct 2023
6	Ashish Mundhada	Ideal Tech Info	7 Jan 2023	31 Dec 2023
7	Anuj Kunder	Bharat RobotiX	6 Mar 2024	30 Aug 2024
8	Anuj Kunder	Best Akys	2 Aug 2024	4 Jul 2024
9	Rahul Kumar Yadav	Pi R Square Pvt. Ltd.	2 Jun 2023	1 Jun 2024
10	Suraj Singh	Infotrixs	8 Jan 2023	31 Aug 2023
11	Mihir Shrivas	Accenture	10 Aug 2023	12 Aug 2023
12	Jateen Tirlotkar	Infotrix	7 Mar 2023	8 Mar 2023
13	Sakshi Thorbole	The Sparks Foundation	6 Jan 2023	7 Jan 2023
14	Mayur Shinde	Eloquent Info Solutions Private Limited	4 Jan 2024	30 Sep 2024
15	Suraj Singh	Infotrixs	8 Jan 2023	31 Aug 2023

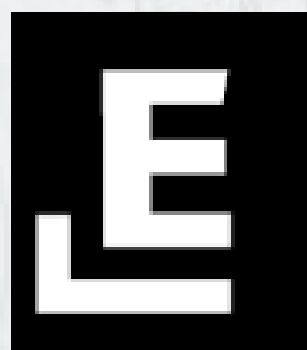
Internship Details of

A.Y. 2023-24

Sr No	Student Name	Name of organization where internship is done	Starting Date	Ending Date
16	Suraj Singh	Prodigy Infotech	15 Jan 2024	15 Feb 2024
17	Yash Umredkar	Maharashtra cyber cell (Mumbai police)	2 Jun 2023	8 Jul 2023
18	Gulshan Yadav	EdgeToTrade	2 Jan 2023	4 Jan 2024
19	Vinayak Somvanshi	Data Science Wizards	3 Nov 2024	9 Oct 2024
20	Gulshan Yadav	EdgeToTrade	2 Jan 2023	3 Jan 2024
21	Pooja Sharma	CloudFronts Technology	19 Feb 2024	29 Mar 2024
22	Abhishek Shinde	Bynarc Systems pvt Ltd	8 Jan 2023	30 Sep 2023
23	Rahul Kumar Yadav	DSW	3 Nov 2024	9 Oct 2024
24	Swapnil Joshi	IEEE BOMAY SECTION in Collaboration with Alhansat Solution	15 Sep 2023	31 Oct 2023
25	Urvi Joshi	Prodigy InfoTech	12 Jan 2023	31 Dec 2023
26	Pratik Ingale	Learnwik Solutions	1 May 2023	3 May 2023
27	Rutuja Wagh	Prodigy Infotech	8 Jan 2023	31 Aug 2023
28	Kashish Kothawala	Prodigy InfoTech	10 Jan 2023	31 Oct 2023
29	Kashish Kothawala	Acmegrade	7 Dec 2023	8 Dec 2023
30	Abdul Hadi Shah	Manyaa Healthcare	19 Aug 2023	20 Nov 2023

Internship Details of A.Y. 2023-24

Sr No	Student Name	Name of organization where internship is done	Starting Date	Ending Date
31	Prince Prajapati	Chaitanya Cyber Strix Technology Pvt Ltd	13 Nov 2023	14 Jan 2024
32	Bharat Sharma	Manyaa	17 Aug 2023	22 Nov 2023
33	Ayush Patil	Static.Int Educare	7 Apr 2022	14 Aug 2022



Internship Details of A.Y. 2023-24



10-07-2023

Internship Certificate

Dear Subhashish Mahapatra,

We are pleased to present you with this certificate to acknowledge your successful completion of the Internship program at StockHolding Corporation of India Ltd. We commend your dedication, hard work, and enthusiasm throughout the 45 days internship period.

During your Internship, you actively engaged in various technologies and products relevant to our company's operations.

1. Zoho Analytics
2. BitBucket Server and SourceTree Client
3. Contact Center as a Service

We hope that your experience at StockHolding Corporation of India Ltd. has been insightful and enriching. We believe that the skills you have acquired during this internship will serve as a solid foundation for your future endeavours in the field.

Once again, congratulations on successfully completing your internship with us. We extend our gratitude for your valuable contributions and wish you continued success in all your future endeavours.

Sincerely,

Nayab Falke
Senior Manager - IT Automation
StockHolding Corporation of India Ltd.
SHCIL House, MIDC Mahape, Navi Mumbai
Navi Mumbai - 400710
Maharashtra, India

Stock Holding Corporation of India Limited*

Registered Office: 301, Centre Point, Dr. Babasaheb Ambedkar Road, Parel, Mumbai - 400 012.

☎ 022 - 6177 9400-09; CIN : U67190MH1986GO1040506 🌐 www.stockholding.com

Mahape : SHCIL House, Plot No. P-51, T.T.C. Industrial Area, MIDC, Mahape, Navi Mumbai - 400 710.

☎ 022-6177 8100; CIN : U67190MH1986GO1040506 🌐 www.stockholding.com

AICTE Virtual Internship Program

Completion Statistics (I Half A.Y. 2023-2024)

Cohort 6 (SEP-NOV '23)

Sr. No.	Domain	Industrial Collaboration	No. of Completion
1	AI - ML VIRTUAL INTERNSHIP PROGRAM	AWS Academy	25
2	ANDROID DEVELOPER VIRTUAL INTERNSHIP	Google For Developers	26
3	CLOUD VIRTUAL INTERNSHIP	AWS Academy	52
4	CYBERSECURITY VIRTUAL INTERNSHIP PROGRAM	Palo Alto Networks Cybersecurity Academy	55
5	DATA ENGINEERING VIRTUAL INTERNSHIP	AWS Academy	44
6	EMBEDDED SYSTEM DEVELOPER VIRTUAL INTERNSHIP	Microchip Academy	1
7	INTELLIGENT AUTOMATION VIRTUAL INTERNSHIP	Blue Prism	3
8	NETWORK SECURITY ASSOCIATE VIRTUAL INTERNSHIP	Juniper Networks Cloud and Automation Academy	3
9	NETWORKING CLOUD VIRTUAL INTERNSHIP PROGRAM	Juniper Networks Cloud and Automation Academy	10
10	NETWORKING VIRTUAL INTERNSHIP PROGRAM	Juniper Networks Cloud and Automation Academy	6
11	ZERO TRUST CLOUD SECURITY VIRTUAL INTERNSHIP	AWS Academy	73

AICTE Virtual Internship Program

Completion Statistics (I Half A.Y. 2023-2024)

Cohort 7 (JAN-MAR '24)

Sr. No.	Domain	Industrial Collaboration	No. of Completion
1	CYBERSECURITY VIRTUAL INTERNSHIP PROGRAM	Palo Alto Networks Cybersecurity Academy	1
2	CLOUD VIRTUAL INTERNSHIP	AWS Academy	17
3	AI - ML VIRTUAL INTERNSHIP PROGRAM	AWS Academy	2
4	NETWORKING VIRTUAL INTERNSHIP PROGRAM	Juniper Networks Cloud and Automation Academy	32
5	PROCESS MINING VIRTUAL INTERNSHIP PROGRAM	Celonis Academy	1
6	AI - ML VIRTUAL INTERNSHIP PROGRAM	Google for Developers	71
7	EMBEDDED SYSTEM DEVELOPER VIRTUAL INTERNSHIP	Microchip Academy	52
8	ZERO TRUST CLOUD SECURITY VIRTUAL INTERNSHIP	Zscaler Cyber Academy	1
9	ANDROID DEVELOPER VIRTUAL INTERNSHIP	Google for Developers	87
10	Business Analyst Virtual Internship	Celonis	11
11	Data Engineering Virtual Internship	AWS Acaademy	88

AICTE Virtual Internship Program

Completion Statistics (I Half A.Y. 2023-2024)

Cohort 8 (APR-JUNE '24)

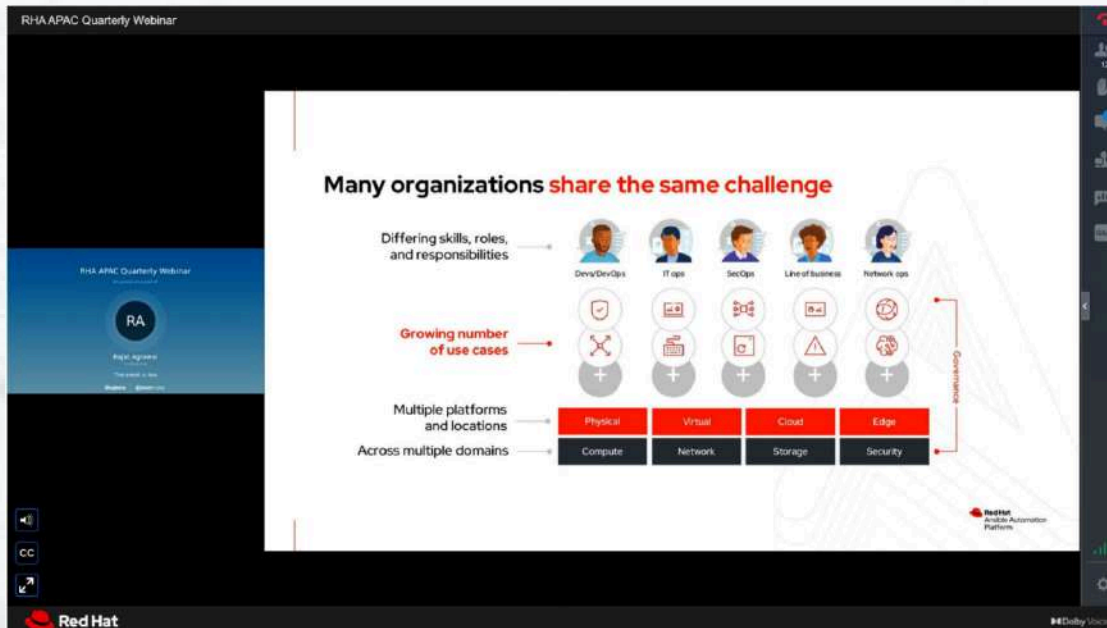
Sr. No.	Domain	Industrial Collaboration	No. of Completion
1	Zscaler Zero Trust Cloud Security Virtual Internship	Zscaler	25
2	UiPath RPA Developer Virtual Internship	Blue Prism University	20
3	Palo Alto Cybersecurity Virtual Internship	Palo Alto Networks Cybersecurity Academy	13
4	Microchip Embedded System Developer Virtual Internship	Microchip	3
5	Juniper Networking Virtual Internship	Juniper Networks Cloud and Automation Academy	7
6	Juniper Networking Cloud Virtual Internship	Juniper Networks Cloud and Automation Academy	81
7	Google Android Developer Virtual Internship	Google for Developer	50
8	Google Ai-ML Virtual Internship	Google for Developer	21
9	Fortinet Network Security Associate Virtual Internship	Fortinet Academy	3
10	Celonis Process Mining Virtual Internship	Celonis Process Mining Academy	18
11	Blue Prism Intelligent Automation Virtual Internship	Blue Prism University	5
12	Alteryx Data Analytics Process Automation Virtual Internship	Alteryx Academy	26
13	Altair Data Science Master Virtual Internship	Altair Academy	48
14	Altair Conceptual Cae Design And Simulation Virtual Internship	Altair Academy	1

EVENTS



EXPERT TALKS

Automation and Private Cloud Using Red Hat Technologies



The session commenced with an in-depth discussion on the significance of automation in IT infrastructure. The speakers elaborated on the automation tools and practices crucial for streamlining tasks, enhancing efficiency, and minimizing errors in modern IT environments. The core focus of the webinar was the deployment of private clouds using Red Hat technologies. Students gained insights into Red Hat's solutions for building, managing, and scaling private cloud infrastructures, fostering a deeper understanding of cloud computing principles. The webinar showcased Red Hat OpenShift, illustrating its role in container orchestration. Students learned how OpenShift simplifies the deployment and management of containerized applications, providing a seamless experience for developers.



EXPERT TALKS

A Roadmap to Career Excellence



The aim of the event was to provide students invaluable insights about the journey of speaker from education to career excellence. She shared her experiences related to continuous learning, networking and mentorship. She emphasized on the importance of global certificate and value-added course as apart of academic activity. Shubhangi told the significance of AICTE Virtual internship program which eventually helped her in building strong candidate profile for placements. She highlighted the value of soft skills along with technical knowledge which plays a vital role in shaping one's career in long run. She also shared few hacks of clearing different phases of placement drive including aptitude test, group discussion round , technical interview and personal interview.



EVENTS CONDUCTED DURING A.Y 2023-24

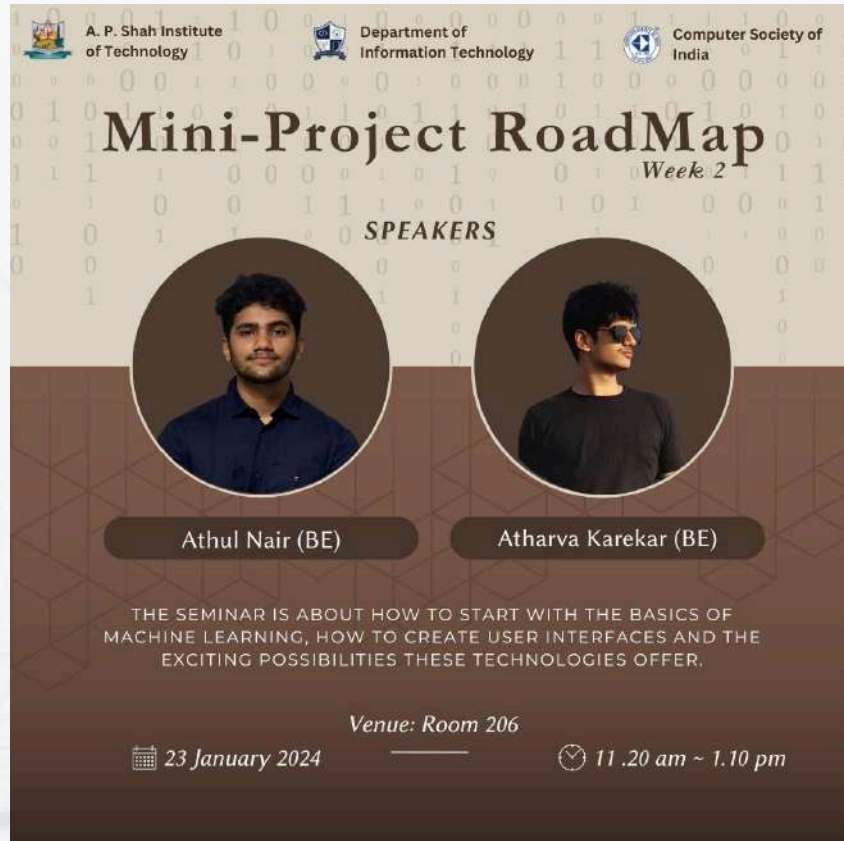
Sr. No.	Title of Expert Talk	Date
1	Building Real-Time Network Applications with Socket API	29 Mar 2024
2	Cloud Native OS- Powering Distrubuted Computing Infrastructure	18 Mar 2024
3	Shift Register Counters and applications of Flip flops	12 Feb 2024
4	Portfolio Using Angular 8	12 Mar 2024
5	Driving Decision with PowerBI: The Art of Data Visualization	5 Mar 2024
6	Poster Presentation on Green IT	18 Mar 2024
7	Efficient Software Project Management: Integrating Energy Conserving Practices	28 Mar 2024
8	Exploring the esesntial of Postman: API Testing & Development	4 Apr 2024
9	Understanding Importance of Forensic report generation after investigation	5 Feb 2024
10	Unlocking the power of Blockchain: A deep dive session	5 Apr 2024
11	Python Application using Flask on Cloud	5 Apr 2024
12	Roadmap to BE Major project selection	11 Jul 2023
13	Disaster Management in Infrastructure Security	9 Oct 2023
14	Infrastructure Security Testing Tools	29 Aug 2023
15	Unleashing the potential of test automation in software development	9 Aug 2023

EVENTS CONDUCTED DURING A.Y 2023-24

Sr. No.	Title of Expert Talk	Date
1	Exploring Database Operations through AP	25 Aug 2023
2	Automation and Private Cloud using Red Hat Technologies by RHA	10 Aug 2023
3	Linux Automation with Ansible	11 Aug 2023
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MACHINE LEARNING UNVEILED: EASY STEPS FOR NEW LEARNERS

By the Students For the Students



The session took a careful step-by-step approach to help future technologists learn the knowledge and skills needed to start their mini projects. Throughout the event, students gained valuable insights into the intricacies of setting up their projects, searching for datasets, and utilizing tools such as Kaggle. As the event unfolded, it became clear that machine learning holds immense importance in the IT landscape and shouldn't be overlooked. The speakers conveyed their experience, shedding light on the practical aspects of the demonstration. They specifically delved into a straightforward yet illustrative dataset, exemplifying the widely known "Iris" dataset. The event, marked by enthusiasm and engagement, was not just an introduction to machine learning but a journey into the limitless possibilities it presents. The event served as a gateway for students to delve into the fascinating world of machine learning, offering a glimpse into the transformative potential it holds for the future. The session was overall informative and motivational for 50 students of TE IT and BEIT. Proceeding towards the end, Mr. Rutwik also discussed Part-time jobs, the internship process, and hostel accommodation. Also, he shared his experience of staying abroad and studying and working on various projects.

INFRASTRUCTURE SECURITY TESTING TOOLS

By the Students For the Students



This event was to provide participants with a comprehensive understanding of infrastructure security testing tools through practical insights and discussion. The event commenced with an exploration of the career journey in the field of cybersecurity and insights. Attendees gained a valuable understanding of crafting effective test cases. The session then shifted focus to the practical aspects of downloading and installing Nmap, crackmapexec a crucial tool for network scanning and security assessment. A key highlight of the event was the introduction of Hydra, a powerful technology poised to revolutionize the cybersecurity landscape. Mr. Sushant Kamble demonstrated how to harness Hydra's potential, making cybersecurity more accessible and effective.

A promotional poster for a seminar. At the top, it features the logos of A. P. Shah Institute of Technology and Varutra Consulting Pvt. Ltd. The main title is "CYBER - SECURITY CLUB" in large white letters on a dark blue background, followed by "presenting" in green and "INFRASTRUCTURE TESTING TOOLS" in yellow. A circular portrait of the speaker, Mr. Sushant Kamble, is on the left. To the right, event details are listed with icons: a calendar for "29 AUGUST, 23", a clock for "10.30 am", and a location pin for "008, SEMINAR HALL". At the bottom, the speaker's name and title are listed: "SPEAKER: SUSHANT KAMBLE (TECHNICAL LEAD @ VARUTRA CONSULTING PVT. LTD.)".

CYBER - SECURITY CLUB
presenting
INFRASTRUCTURE TESTING TOOLS

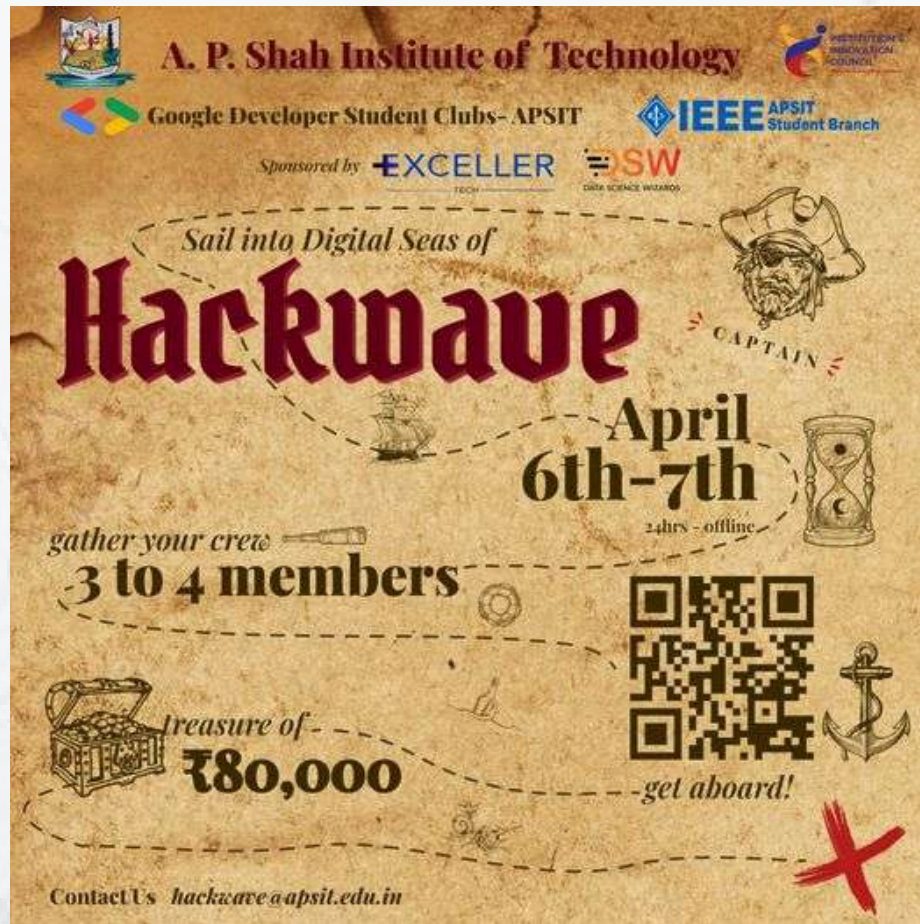
29 AUGUST, 23
10.30 am
008, SEMINAR HALL

SPEAKER: SUSHANT KAMBLE
(TECHNICAL LEAD @ VARUTRA CONSULTING PVT. LTD.)

COMPUTER SOCIETY OF INDIA

Hackwave 2024

Hackwave 2024: A Technological Triumph



Hackwave 2024, a thrilling 24-hour hackathon hosted by the IT, Computer Engineering, CSE-Data Science, and CSE-AIML departments at A. P. Shah Institute of Technology, brought together 50 selected teams from 146 registrations to tackle real-world challenges in Sustainability and Intelligent Automation. Held on April 6–7 in collaboration with APSIT GDSC and APSIT IEEE Students Chapter, the event showcased outstanding innovation, teamwork, and mentorship. Winners—Villian Arc, Hack Stars, PIXCEL, and EyeQ—stood out with their impactful solutions. More than a competition, Hackwave 2024 celebrated learning, collaboration, and the spirit of technological change, inspiring future innovators.

COMPUTER SOCIETY OF INDIA

Hackwave 2024

Hackwave 2024: A Technological Triumph





PLACEMENTS

OUR RECRUITERS



Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
Our Recruiters



Training & Placement Cell

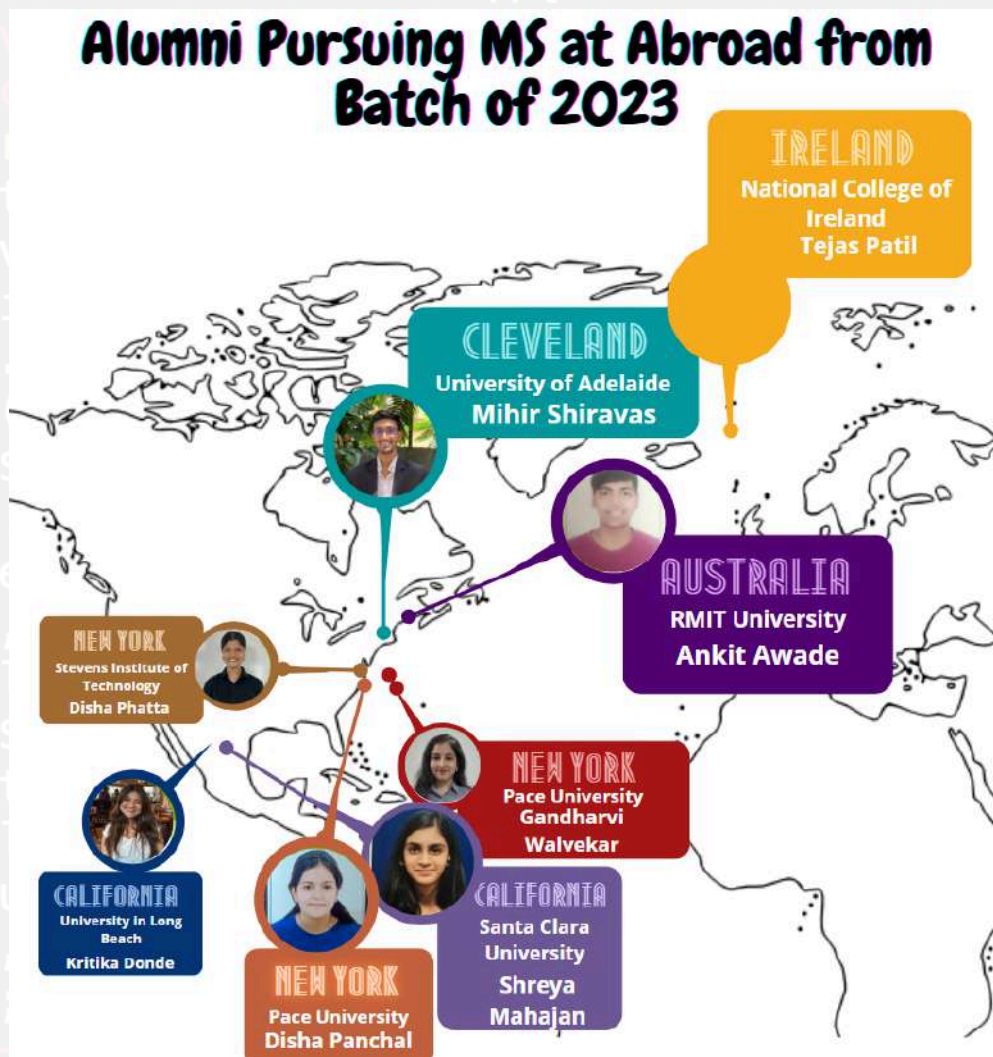
87 Students were placed during AY 2023-24.



To help students in getting the best industry opportunities our training & placement cell provides various training programs & placement opportunities. We strive hard for overall development of students. Our students got placed in top-notch IT core companies during Academic Year 2023-24.

- Prof. Geetanjali Kalme, TP Co coordinator.

STUDENTS PURSUING HIGHER STUDIES AT ABROAD FROM BATCH OF 2023-24



8 Students got admission in reputed Foreign University during AY 2023-24.



To help students in getting admission in reputed foreign Universities. Our training and placement cell provides GRE coaching classes free of cost. We strive hard over all development of students, as a result 8 students got admission in well known foreign Universities during A. Y. 2023-24

- Prof. Geetanjali Kalme, TP Co coordinator



ARTICLES



GENERATIVE AI

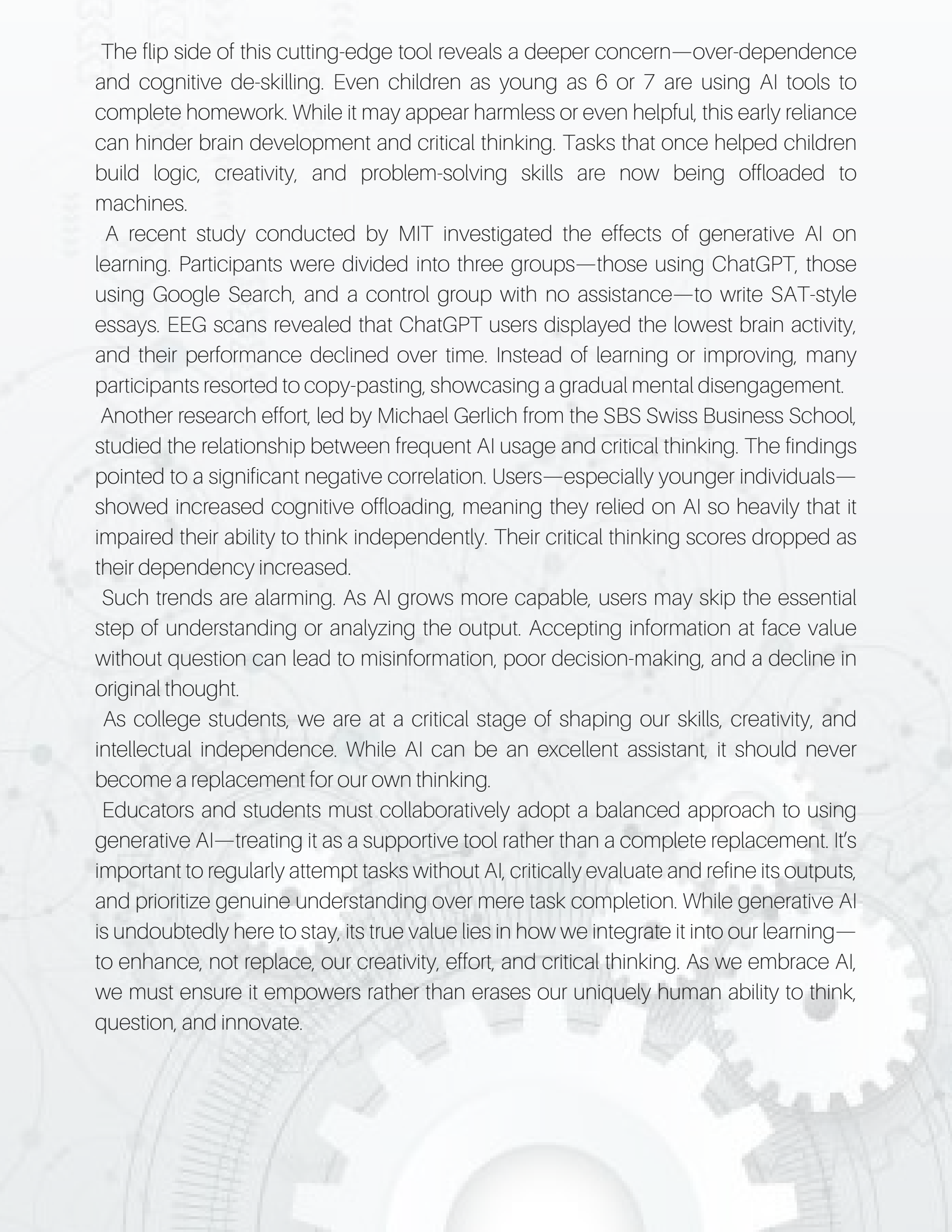
Generative AI: Empowering Minds or Weakening Them?

Vedangi Patil, TEIT

In today's digital age, generative AI has become a go-to assistant for nearly every task—whether it's something as small as rephrasing a sentence or as significant as drafting detailed scientific reports. Its rapid rise and user-friendly capabilities have deeply engrossed society, especially due to the ease and speed it offers. It empowers those with brilliant ideas but limited writing ability to express themselves clearly, enabling high-quality outputs with minimal effort.

For creators—writers, designers, and artists—generative AI serves as a powerful ideation partner. Writers can use AI to generate plot ideas, character sketches, or even full paragraphs, helping them overcome creative blocks. Designers input rough concepts or prompts into tools like DALL·E or Midjourney to instantly receive mockups, layout options, or color schemes. This accelerates the conceptual phase, encouraging quick exploration of diverse styles. Likewise, artists can visualize their creations in various artistic interpretation, allowing them to experiment with mediums they might not otherwise consider.

By significantly reducing cognitive load, generative AI saves time and energy in nearly every creative or intellectual task. However, the question remains: is everything truly as "goodie goodie" as it seems?

The background of the entire page features a faint, light gray illustration of several interlocking gears of different sizes, creating a mechanical or technological theme.

The flip side of this cutting-edge tool reveals a deeper concern—over-dependence and cognitive de-skilling. Even children as young as 6 or 7 are using AI tools to complete homework. While it may appear harmless or even helpful, this early reliance can hinder brain development and critical thinking. Tasks that once helped children build logic, creativity, and problem-solving skills are now being offloaded to machines.

A recent study conducted by MIT investigated the effects of generative AI on learning. Participants were divided into three groups—those using ChatGPT, those using Google Search, and a control group with no assistance—to write SAT-style essays. EEG scans revealed that ChatGPT users displayed the lowest brain activity, and their performance declined over time. Instead of learning or improving, many participants resorted to copy-pasting, showcasing a gradual mental disengagement.

Another research effort, led by Michael Gerlich from the SBS Swiss Business School, studied the relationship between frequent AI usage and critical thinking. The findings pointed to a significant negative correlation. Users—especially younger individuals—showed increased cognitive offloading, meaning they relied on AI so heavily that it impaired their ability to think independently. Their critical thinking scores dropped as their dependency increased.

Such trends are alarming. As AI grows more capable, users may skip the essential step of understanding or analyzing the output. Accepting information at face value without question can lead to misinformation, poor decision-making, and a decline in original thought.

As college students, we are at a critical stage of shaping our skills, creativity, and intellectual independence. While AI can be an excellent assistant, it should never become a replacement for our own thinking.

Educators and students must collaboratively adopt a balanced approach to using generative AI—treating it as a supportive tool rather than a complete replacement. It's important to regularly attempt tasks without AI, critically evaluate and refine its outputs, and prioritize genuine understanding over mere task completion. While generative AI is undoubtedly here to stay, its true value lies in how we integrate it into our learning—to enhance, not replace, our creativity, effort, and critical thinking. As we embrace AI, we must ensure it empowers rather than erases our uniquely human ability to think, question, and innovate.



FTANet

Yukti Ogare, SEIT

Enhancing Music Search: Smarter Humming with FTANet and Partial Matching

With the rise of search engine technology, finding information has become easier than ever whether it's a news article, a recipe, or even a piece of music. In the field of Music Information Retrieval (MIR), one of the most intuitive and natural methods for music search is Query by Humming (QbH). It allows users to simply hum a tune and receive matching songs from a music database.

Over the years, many algorithms have been developed to make this process more accurate. One such method is the Unified Algorithm, which breaks down the QbH system into two main stages: melody extraction and melody matching. However, recent studies suggest that this traditional, statistical-based approach may no longer be the most effective—especially when compared to modern, data-driven methods. A common challenge with QbH is that users typically hum only a small part of a song, such as a chorus or intro. Traditional systems often try to match that short input with entire melodies, which reduces accuracy. To address this issue, researchers have proposed a new approach that modifies the Unified Algorithm by incorporating partial query matching—allowing the system to compare the hummed segment with parts of songs, rather than the full track. Additionally, a major advancement in melody extraction has come with the introduction of the Frequency-Temporal Attention Network (FTANet).

The background of the page features a faint, light gray graphic. It consists of several interlocking gears of different sizes, some of which are white with gray outlines, while others are gray. Overlaid on these gears is a network diagram with small circular nodes connected by thin, curved lines, suggesting a complex system or data flow.

This deep learning model mimics human hearing by focusing on the most important parts of a melody, both in terms of frequency (pitch) and time (rhythm). By combining FTANet for melody extraction with the improved partial matching method, the QbH system becomes significantly more accurate than previous versions. However, this improvement doesn't come without trade-offs. The enhanced system requires more computational power and processing time for both extracting and matching melodies. This makes it less suitable for large-scale databases or real-time applications without further optimization.

The study also concluded that the original Unified Algorithm is not well-suited for systems that need to handle large music libraries. As the size of the dataset increases, performance declines, and processing becomes inefficient.

In conclusion, this research highlights the shift from traditional statistical models to intelligent, data-driven approaches in music search. The combination of FTANet and partial matching presents a promising step forward in QbH systems, making music search by humming more accurate and user-friendly—especially for smaller, focused applications.



QUANTUM COMPUTING

Quantum Computing

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Quantum Computing: Bridging Physics and Intelligence for a New Era

In the world of modern technology, Quantum Computing stands as a dazzling bridge between two monumental scientific revolutions of the 20th century: computer science and quantum physics. While quantum physics gave us the transistor and laser—cornerstones of the digital age—our current computers still run on traditional Boolean logic at their algorithmic core. But what if we could replace that “classical” logic with the fundamental laws of quantum mechanics? This is precisely what quantum computing seeks to do - opening doors to solve problems that even our most powerful supercomputers can't handle efficiently.

At the heart of quantum computing is its radical approach to information processing. Rather than using conventional bits that are either 0 or 1, quantum computers use qubits, which can exist in multiple states simultaneously thanks to superposition. This means they can perform massive numbers of calculations in parallel.

This unique power is especially promising for problems involving optimization, sampling, search, or quantum simulation—tasks that often cripple even the fastest classical processors

The potential impact is huge in fields like artificial intelligence and machine learning, where many applications depend on solving complex optimization puzzles or performing efficient sampling.

Despite its promise, realizing large-scale quantum computing is far from trivial. One major hurdle is grounded in the core of quantum error correction theory, which assumes that quantum gates can scale up to large processors without breaching the fault-tolerance threshold. But in practice, this means overcoming two major barriers: building high-performance quantum hardware and engineering a robust control system that can operate near physical performance limits. Controlling and synchronizing quantum gates across many qubits is not just tricky—it's a nightmare of non-convex, highly constrained, time-dependent optimization. Recent breakthroughs, however, give reason for hope. For instance, by choreographing the frequency trajectories of 68 superconducting qubits, researchers have successfully executed single- and two-qubit gates while significantly suppressing computational errors. This control optimization strategy not only reduced physical error rates by nearly fourfold but also shows promise for scaling to logical qubits involving thousands of physical qubits.

One of the most anticipated industrial applications of quantum computing is in quantum chemistry. Accurately predicting how drug molecules interact with biological targets at the atomic level could revolutionize pharmaceutical research. Although quantum computers are still far from daily use in labs, their potential to simulate complex molecular structures and interactions far surpasses current classical methods. This could accelerate drug design, reduce costs, and enable breakthroughs in treatments for diseases once thought untreatable.

Quantum computing could also transform the way we analyze data. Early breakthroughs like those by Lloyd et al. demonstrated quantum algorithms' power to calculate Betti numbers—key features in topological data analysis (TDA), a method for finding hidden shapes in large datasets. Building on this, researchers have developed improved quantum algorithms that reduce scaling problems and optimize complex steps like preparing Dicke states and eigenvalue projections. Interestingly, this research has also revealed that the much-hyped “super-polynomial speedup” is not always guaranteed. Certain conditions, like exponentially large dimensions and Betti numbers, are necessary but not enough. However, carefully crafted problem sets could still unlock genuine quantum advantages, potentially solving problems that are otherwise intractable on classical machines—even those requiring quantum circuits with tens of billions of logic gates. Measurement remains one of the most error-prone steps in any quantum computation, especially with superconducting qubits. New model-based readout optimization strategies are pushing boundaries by achieving low measurement errors with minimal side effects. Tests with 17 qubits have shown error rates as low as 1.5% per qubit while avoiding issues like residual resonator photons, which can cause unwanted qubit state transitions. These advancements promise scalability to hundreds of qubits—an essential step toward making error correction practical.

Quantum computing is still in its early chapters, but its pages are filling quickly with bold experiments and transformative breakthroughs. From reshaping industries like pharmaceuticals and finance to opening new possibilities in artificial intelligence and data science, quantum computing is poised to redefine what's computationally possible. As scientists continue to overcome the hardware and algorithmic challenges that stand in the way, we edge closer to a future where quantum and classical computers work hand in hand—tackling humanity's greatest challenges and solving puzzles once thought unsolvable.



Cybersecurity

CYBERSECURITY

DHRUVIL PANCHAL, TEIT

In today's digital world, much of our lives revolve around technology. From online shopping and banking to social media and work-related tasks, we rely heavily on the internet. With this convenience comes the need for "cybersecurity", which is all about protecting our devices, networks, and personal information from harm and malicious events.

Cybersecurity is the practice of protecting computers, networks, and data from unauthorized access or attacks. Cyberattacks such as hacking, malware, phishing can create a serious risk to personal privacy, financial security, and even national safety. The goal of cybersecurity is to prevent these attacks by implementing protective measures, detecting threats early, and responding to incidents effectively. As technology advances, understanding and prioritizing cybersecurity is essential for ensuring the safety and integrity of our digital lives. Most of the common threats include, Viruses and Malware where malware refers to any software designed to harm a computer or network. Viruses and worms also fall under this category. They can delete files, steal personal data, or take control of your computer respectively.

Phishing attacks involve sending fake emails or messages that look legitimate to trick people into revealing personal information like passwords or credit card numbers. One of the most common threat is Hacking which involves unauthorized access to a computer system to steal information or cause harm. Hackers may exploit weaknesses in security systems to break into networks. One of the threat known as Data Breaches happens when sensitive information, such as credit card details or passwords, is stolen from a company or website.

The importance of cybersecurity lies in protecting our personal and sensitive information from being stolen or misused. As we use the internet for things like banking, shopping, and social media, cybercriminals can try to steal our data, such as passwords or credit card details. Cybersecurity helps keep our information safe from these attacks. For companies, protecting customer data and maintaining trust is crucial. Cyberattacks can cause financial losses, damage reputations, and disrupt services. Cybersecurity is also important for governments to protect their systems from attacks that could compromise national safety and critical infrastructure like energy grids and transportation.

Even though cyber threats sound scary, there are simple things you can do to protect yourself:

1. Making use of strong passwords by making sure passwords are long, unique, and a mix of letters, numbers, and symbols. Avoid using the same password for multiple accounts.
2. Enable Two-Factor Authentication, this adds an extra layer of security by requiring you to confirm your identity with something other than your password, like a text message or email code.
3. Be aware of Suspicious Emails by avoiding clicking on links or downloading attachments from unknown sources, as it contains malware.
4. Keeping your software updated so that regular updates help fix security holes in your operating system, browser and apps respectively
5. Use Antivirus Software, this can detect and remove malware from your computer, keeping it secure.



AI-Powered Communication

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Large Language Models: The Future of AI-Powered Communication

Large Language Models (LLMs) have emerged as one of the most transformative technologies in artificial intelligence. These models, built on deep learning architectures like transformers, have the ability to process, understand, and generate human language with remarkable fluency and coherence. Well-known LLMs such as GPT-4, PaLM, LLaMA, BLOOM, and Gemini have demonstrated that machines can perform complex tasks like translation, summarization, question answering, dialogue generation, reasoning, and even software coding at near-human levels. At the heart of these models lies the attention mechanism, a key innovation that allows them to identify relationships between words and concepts across long sequences of text.

The success of LLMs is driven by their massive scale. They are trained on enormous datasets — often containing terabytes of text from books, articles, websites, and other digital sources. These models are composed of hundreds of billions of parameters and require powerful hardware, such as large clusters of GPUs and TPUs, for training. As the models grow larger, they exhibit emergent abilities, including in-context learning, step-by-step reasoning, decision-making, and problem-solving, even without explicit task-specific training.



As the models grow larger, they exhibit emergent abilities, including in-context learning, step-by-step reasoning, decision-making, and problem-solving, even without explicit task-specific training. Importantly, LLMs are evolving beyond text; multi-modal LLMs now integrate capabilities for processing images, audio, video, code, and even sensory data. This makes them suitable for a wide range of applications, from robotics and autonomous agents to healthcare diagnostics, financial analysis, and scientific discovery.

A major strength of LLMs is their adaptability. Through fine-tuning, instruction-tuning, and alignment techniques like reinforcement learning with human feedback (RLHF), these models can be customized for specific tasks and made safer and more reliable. Chain-of-thought prompting, self-consistency methods, and advanced reasoning prompts further enhance their ability to tackle complex problems. Researchers are also working on creating efficient architectures such as mixture-of-experts models, pruning, quantization, and knowledge distillation methods to reduce the computational demands of these massive systems.

However, the rise of LLMs brings significant challenges. The vast training data can introduce biases, leading to unfair or harmful outputs. There are concerns about the generation of false or misleading information, as well as intellectual property and data privacy issues. Additionally, training and running these models consume substantial energy, raising environmental concerns. The research community is actively exploring ways to address these problems, including better data filtering, alignment with ethical guidelines, and the development of more energy-efficient training and inference techniques.

Looking ahead, LLMs are poised to reshape how we interact with technology. They offer the promise of more natural, intelligent, and context-aware human-computer communication. As they continue to evolve, balancing innovation with responsibility will be crucial to ensure that these powerful tools serve humanity in positive, fair, and sustainable ways.