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CODE CHRONICLES

A newsletter of Department of
Computer Science and Engineering

AHALIA SCHOOL OF ENGINEERING & TECHNOLOGY

ISO 9001:2015 Certified Institution. Approved by AICTE & Affiliated to A. P. J. Abdul Kalam Technological University

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AHALIA SCHOOL OF ENGINEERING AND TECHNOLOGY

ABOUT

Ahalia School of Engineering & Technology (ASET), Palakkad, an ISO 9001:2015 certified institution, is approved by All India Council for Technical Education (AICTE) and is affiliated to the A. P. J. Abdul Kalam Technological University, Kerala. We provide world-class technical education and training in the fields of Science, Engineering, Technology and Management to meritorious students from diverse socio-economic backgrounds. The college is located in a lush green campus with a beautiful view of the Western Ghats. It provides a peaceful and congenial atmosphere, ideal for students for their overall holistic development. Ahalia School of Engineering and Technology offers five Bachelor of Technology (B.Tech.) courses in Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering and Mechanical Engineering, that is complemented by various co-curriculur and extra-curriculur activities. ASET is one of the several institutions in Ahalia Campus.

VISION

Grow as a center of learning and research, transforming students to professionals with knowledge, skill, competence, commitment, confidence through decisive learning and contribute to the sustainable development of the society.

MISSION

- To instil technical expertise in order to address current and emerging challenges in the quest for creating sustainable and high-quality livelihoods.
- To foster a culture of research, innovation, and entrepreneurship through determined learning .
- To promote an environment that supports the welfare of society through ethical and professional count.

MESSAGE FROM PRINCIPAL

DR. P R SREE MAHADEVAN PILLAI
PRINCIPAL

I am very happy that dept of computer science is bringing out this newsletter. It is my pleasure to present to you the new issue of “Code Chronicles ” covering various events and achievements of the students, faculty members, staff and alumni of CSE dept .We have conducted technical workshops, hands on sessions and expert sessions over these time period , which have brightened the young minds ,so that they are ready to face the challenges ahead.

I am very happy and proud to note that the staff and the students have actively taken part invarious academic, sports, cultural and research activities .In the days to come, staff and the Students should try their best to learn advancements in AI, quantum computing, edgecomputing and programming for robotics . My heartiest congratulations to all of them for thewonderful Achievements. Wish you a happy reading.

MESSAGE FROM HOD

DR.S GUNASEKARAN
HOD, CSE

Dear Students,
It gives me immense pleasure to reach out to you all through this edition of our student magazine. I am proud to witness the incredible enthusiasm, innovation, and dedication each one of you brings to the Computer Science and Engineering (CSE) department.Your curiosity, hard work, and continuous drive for excellence arewhat make our department a thriving hub of learning and growth

As we move forward in this rapidly evolving world, technology continues to shape every aspect of our lives. We are witnessing transformative advancements in areas such as Artificial Intelligence (AI), Machine Learning (ML), Blockchain, the Internet of Things (IoT), Quantum Computing, and Cybersecurity. These are no longer concepts of the future, but technologies that are actively shaping the present and demanding new skill sets. I encourage each one of you to explore these fields, stay updated, and actively engage with them in your projects and research work.Ahalia School of Engineering and Technology College is committed to providing the bestplatform for you to build your future. With the introduction of newer technologies and collaborations with industry, we aim to equip you with the tools to innovate and lead in yourcareers. I urge all students to take advantage of these opportunities and strive to become pioneers in this dynamic and ever-evolving field.Remember, learning is a lifelong journey, and the best way to predict the future is to createit. I wish you all the very best in your academic endeavors, and I look forward to seeing theremarkable achievements and contributions you will bring to the world of technology.

COMPUTER SCIENCE AND ENGINEERING

ABOUT

The Department of Computer Science and Engineering at the Ahalia School of Engineering and Technology, Palakkad was started in the year 2012 at the time of starting of the engineering college and provides an outstanding academic environment complimented by excellence in teaching. The department offers B.Tech degree. The Department has a comprehensive syllabus on topics covering all the aspects of computer hardware and software with an emphasis on practical learning. The course structure includes courses on latest topics to equip our students with the latest developments in computer science and engineering.

VISION

To develop computer science engineers with knowledge, computing skills and empowering them to excel in their profession through performance based learning contributing to sustainability, well-being of the society and professional ethics.

MISSION

To implement effective outcome-based education that fosters the development of competent and skilled graduates, empowering them to promote and adopt sustainable practices.

To cultivate a sense of ethics and emphasize awareness of social, legal, and professional conduct adhering to the standards of ethical and professional behaviour.

To provide students with opportunities to engage in advancements in computer science and engineering through interdisciplinary research, collaborative projects that encourage innovation and entrepreneurship.

CSE PLACEMENTS


Congratulations
Diya Krishna P
2020-24
B.Tech CSE
For getting placed at
mitsogo
AHALIA
SCHOOL OF ENGINEERING & TECHNOLOGY
NAAC


Center for Career Development
Congratulations
Ashwin Suresh
B.Tech CSE
(2020-24)
For getting Placed at
Speridian
TECHNOLOGIES
AHALIA SCHOOL OF
ENGINEERING &TECHNOLOGY
AHALIA CAMPUS, PALAKKAD
Affliated to KTU | Approved by AICTE | Accredited by NAAC


https://ahalia.ac.in/
Congratulations!
FOR GETTING PLACED AT
6D Technologies™
Smart Ideas, Delivered
BINOJ B.
CSE 2020-24 BATCH
PRANAV SUNIL
CSE 2020-24 BATCH
AHALIA SCHOOL OF ENGINEERING & TECHNOLOGY
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NAAC

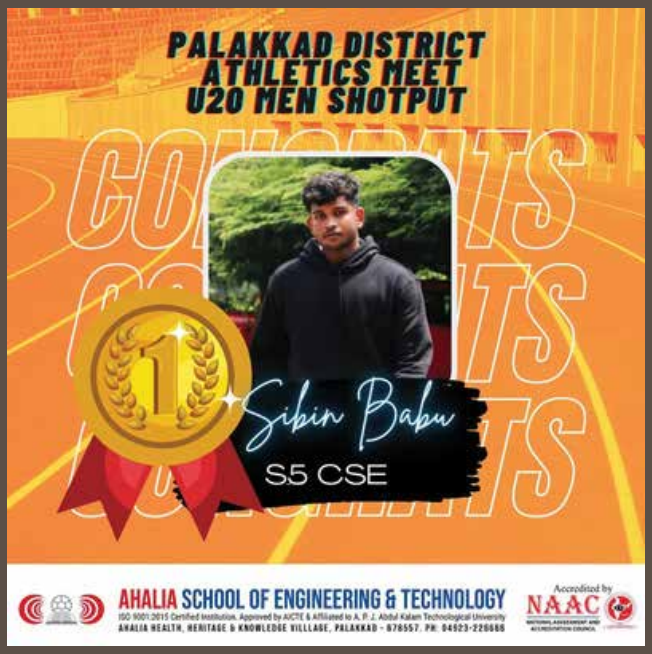

AHALIA SCHOOL OF ENGINEERING & TECHNOLOGY
Accredited by NAAC
Aswanth Krishna M
B.Tech CSE
2020-24
Congatulations!
For being placed at UST global
U S T


AHALIA SCHOOL OF ENGINEERING & TECHNOLOGY
Vishnuram B
2020-2024 B.Tech CSE
Congratulations
Placed at iWave

STUDENT ACHIEVEMENTS

SPORTS

Palakkad District Athletic Meet.
October 3, 2023

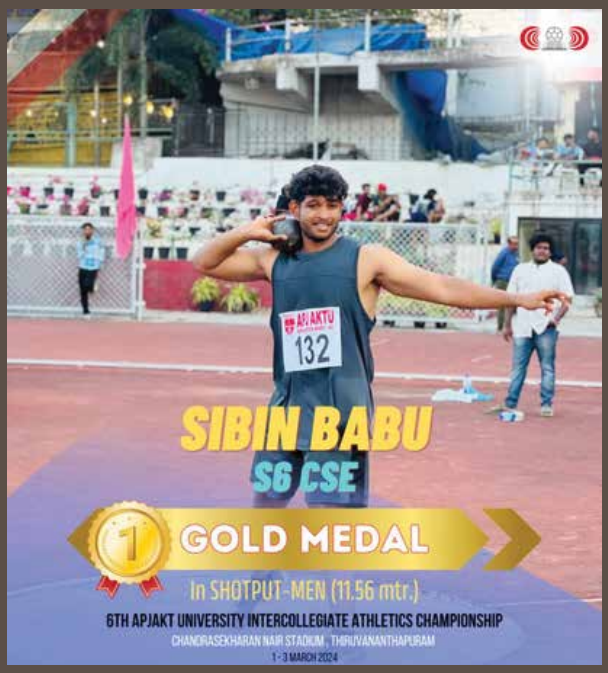


Congratulations to Sibin Babu S5 CSE for securing first prize under 20 men shotput.

South Zone Inter - University championship, CHENNAI.
November 22, 2023

Sree Shankar K. S - S1 CSE (A) is being honoured for securing selection in the APJAKT University table tennis team to participate in the South Zone Inter – University championship to be held at Chennai.

APJAKTU Intercollegiate Athletics Championship 2024.
March 4, 2024



Congratulations to Sibin Babu (2021–25, CSE) for securing the gold medal in shotput for men (11.56 mtr.) in the 6th APJAKTU Intercollegiate Athletics Championship 2024 held at Chandrasekharan Nair Stadium, Thiruvanathapuram. from 1–3 March 2024

ALL INDIA INTER UNIVERSITY CHAMPIONSHIP, KURNOOL.
17-20 MARCH 2024

Suhail S of S4 CSE selected to the 'SEPAKTAKRAW' team of the APAJKT University.

IGNITRON - National Level Inter Collegiate Competition
November 5, 2023

S5 CSE students of Ahalia School of Engineering and Technology, Ms. Merin E. & Ms. Theja M. S., secured First Prize in the glitch hunt in the IGNITRON – National Level Inter Collegiate Competition organized by Bharathamatha College of Arts & Science, Palakkad.

ARTICLES

MS. SOUMYA
Assistant Proffessor, CSE

Blockchain Technology: Beyond the Hype of Cryptocurrency

Over the past decade, the word “blockchain” has become almost synonymous with cryptocurrencies like Bitcoin and Ethereum. While these applications have captured headlines, blockchain technology itself represents a far broader paradigm shift—one that extends well beyond digital money. At its core, blockchain offers a decentralized, secure, and transparent way of recording information, with potential applications across industries ranging from finance to healthcare, supply chain management, and governance.Blockchain can be thought of as a distributed digital ledger. Each block contains a set of records, and these blocks are linked together chronologically in a chain. Once a block is added, it cannot be altered without consensus from the network, making the system inherently resistant to fraud and tampering. This transparency, combined with decentralization, ensures that trust is not placed in a single entity, but in the collective network of participants.

The combination of cryptography, consensus mechanisms, and distributed architecture is what makes blockchain uniquely powerful. It enables secure peer-to-peer transactions, automated contracts, and verifiable record-keeping—all without the need for central authority.Despite its promise, blockchain adoption is not without challenges. Scalability remains a key concern, as many networks struggle to process large volumes of transactions efficiently. Energy consumption, particularly in proof-of-work systems, has sparked environmental debates. Additionally, integrating blockchain with existing legal, regulatory, and technical frameworks requires careful planning.Security, while a strength, also introduces new responsibilities. Poorly designed smart contracts or mismanaged private keys can lead to vulnerabilities. Understanding these nuances is essential for students and professionals exploring blockchain applications.The future of blockchain lies in innovation and integration. Emerging technologies like blockchain-as-a-service, interoperable networks, and energy-efficient consensus algorithms are paving the way for broader adoption. Beyond finance, blockchain promises to enhance transparency, accountability, and trust in virtually every sector of the economy. For the academic community, blockchain represents a fertile ground for research. From improving scalability and efficiency to exploring ethical and societal implications, there are countless opportunities for inquiry and innovation. Blockchain technology is far more than a buzzword or a vehicle for cryptocurrencies. It is a foundational tool that can reshape how information is shared, verified, and trusted. As industries increasingly recognize its potential, understanding blockchain—its mechanisms, benefits, and challenges—becomes essential for aspiring computer scientists and technology leaders. By embracing this technology thoughtfully, we can build systems that are not only innovative but also transparent, secure, and equitable. Blockchain may well define the next era of digital trust and collaboration.

MS. ASWATHI P V
Assistant Proffessor, CSE

Cybersecurity: Safeguarding Trust in a Digital Society

The rapid digitization of modern society has transformed the way we communicate, conduct business, and store information. While this digital revolution has brought unprecedented convenience and efficiency, it has also introduced a critical challenge cybersecurity. As our dependence on interconnected systems continues to grow, protecting digital assets has become not merely a technical concern, but a societal imperative. Cybersecurity refers to the practice of defending computer systems, networks, and data from unauthorized access, attacks, and damage. In an era where data is often described as the new currency, ensuring its confidentiality, integrity, and availability is central to maintaining trust in digital systems.

. Cyber threats today are far more sophisticated than the early viruses and simple intrusions of the past. Modern attacks range from ransomware and phishing campaigns to advanced persistent threats targeting governments and critical infrastructure. These threats exploit not only technical vulnerabilities but also human behavior, making cybersecurity a multidimensional challenge.The rise of cloud computing, mobile devices, and the Internet of Things has further expanded the attack surface. Every connected device represents a potential entry point for malicious actors. As systems grow in complexity, so too does the need for robust and adaptive security strategies.At its core, cybersecurity is built upon three foundational principles: confidentiality, integrity, and availability. Confidentiality ensures that sensitive information is accessible only to authorized users. Integrity guarantees that data remains accurate and unaltered, while availability ensures that systems and services remain accessible when needed.Achieving these goals requires a combination of technical controls, such as encryption and access management, as well as organizational policies and user awareness. Cybersecurity is not solely the responsibility of security professionals; it is a shared obligation across all levels of an organization.

. In practical terms, cybersecurity is embedded in nearly every aspect of modern computing. Financial institutions rely on it to protect transactions and customer data. Healthcare systems depend on secure platforms to maintain patient confidentiality. Educational institutions safeguard academic records and research data, while governments protect national security information.One of the most significant challenges in cybersecurity is the evolving nature of threats. Attackers continuously adapt their techniques, requiring defenders to remain vigilant and proactive. As a result, cybersecurity has become a dynamic field that demands continuous learning and innovatio.The future of cybersecurity will be shaped by emerging technologies such as artificial intelligence, machine learning, and quantum computing. While these technologies offer new tools for detecting and preventing attacks, they also introduce new risks and ethical considerations. The challenge lies in harnessing innovation while ensuring that security and privacy are not compromised.

ROSHAN SANU
Assistant Proffessor, CSE

Quantum Computing: The Next Revolution

The landscape of computing has evolved dramatically over the past century, from mechanical calculators to supercomputers capable of processing billions of operations per second. Today, we stand on the threshold of another transformative leap: quantum computing. Unlike classical computers, which rely on bits to represent information as 0s or 1s, quantum computers harness the principles of quantum mechanics, using qubits that can exist simultaneously in multiple states. This unique property has the potential to redefine what is computationally possible.At the heart of quantum computing are three key principles: superposition, entanglement, and quantum interference. Superposition allows qubits to exist in multiple states at once, enabling a quantum computer to process vast combinations of possibilities simultaneously. Entanglement links qubits in such a way that the state of one instantly influences the state of another, regardless of distance. Quantum interference, meanwhile, allows certain computational paths to reinforce correct answers while canceling out incorrect ones.

These principles collectively give quantum computers the ability to solve complex problems exponentially faster than classical machines in specific domains. Problems that would take classical computers thousands of years to solve could, in principle, be completed in seconds on a sufficiently advanced quantum system. Quantum computing has the potential to revolutionize numerous fields. In cryptography, it can break classical encryption schemes, prompting a rethinking of digital security. In medicine, quantum simulations can accelerate drug discovery by modeling molecular interactions with unprecedented accuracy. In logistics and optimization, quantum algorithms can improve route planning, supply chain efficiency, and resource allocation. Even artificial intelligence stands to benefit, as quantum computers can enhance machine learning algorithms by processing high-dimensional data more efficiently. While much of this potential remains theoretical, ongoing research and experimentation are rapidly advancing the field. Leading technology companies, academic institutions, and governments are investing heavily in quantum research, aiming to develop practical, scalable quantum computers.

. The trajectory of quantum computing suggests a gradual transition from experimental prototypes to practical applications. Hybrid systems that combine classical and quantum computing may provide the first real-world benefits, enabling industries to solve specialized problems faster and more efficiently. Over the coming decades, quantum computing could reshape computing infrastructure, scientific research, and global technology ecosystems.

Whispers of Nature

The morning sun peeks through the trees,
Dancing gently with the breeze.
Leaves hum secrets soft and low,
Stories only nature knows.

The river sings a silver tune,
Under the watchful, patient moon.
Mountains stand in silent pride,
Holding earth deep down inside.

Flowers bloom without a sound,
Painting colors on the ground.
Birds write poems across the sky,
Teaching clouds how to drift by.

In nature's arms, my worries fade,
In every leaf, a hope is laid.
I learn to pause, to see, to feel—
Nature's truth is calm and real.

PRAVEENA R
S7 CSE

DRAWINGS

MIDHUN T
S1 CSE(A)

CSE Events

2023-24

SEMINAR ON INTRODUCTION TO CLOUD COMPUTING

August 14, 2023

Department of CSE conducted seminar on introduction to cloud computing on 14.08.23. Welcome address by Dr Sivakumar R , Dean CSE and session by Dr S Gunasekaran Hod CSE. Vote of thanks by Mr.Sankar AP CSE. This program motivated the S7 students to choose their elective as Cloud Computing

MoU With College of Applied Science, Ayalur .

September 29, 2023

Ahalia School of Engineering and Technology and College of Applied Science, Ayalur entered into an MoU on 29-09-2023 . The meeting was attended by Ms. Sreela, HoD, Department of Electronics, Mr. Rajeev, Asst. Professor, College of Applied Science, Dr. P. R. Sreemahadevan Pillai, Principal, Dr. Binoy Balan, HoD, Dept. of S & H, Prof. Prakash D., HoD, Dept. of ME, Dr. G. Murugananth, HoD, Dept. of EEE, Dr. Gunasekaran, HoD, Dept. of CSE, Prof. Kripa K. M., HoD, Dept. of CE and Ms. Bindu Valoor, Manager – Academics Outreach. Both parties will be collaborating in activities beneficial for the students, staff and society as a whole.

PLACEMENT TRAINING ORIENATION PROGRAM

August 7, 2023

Center for Career Development, Ahalia School of Engineering and Technology, conducted a placement orientation training program for B Tech pre-final year (S5) students at Visvesvaraya Hall. The program was conducted by Abhijit V., Training and Placement officer & AP- ECE. The objective of the program was to create awareness about placement procedure and importance of training in achieving their career objectives. The program was highly interactive and attended by students from CE, ECE, EEE and CSE.

UST GLOBAL CAMPUS RECRUITMENT

September 12, 2023

UST Global conducted a campus recruitment exam at Ahalia School of Engineering and Technology on 12 September 2023. Thirty four final year B.Tech. CSE students attended the recruitment drive.

SEMINAR ON AWS CLOUD SERVICES

October 27, 2023

Department of CSE, ASET, organized a Seminar on AWS cloud services in association with Techbyheart for final year and second year CSE students of ASET on 27/10/2023., led by Muhammed Mubashir T, AWS Cloud Engineer, Techbyheart.

OPPORTUNITIES IN IT SECTOR

November 10, 2023

Sushil Peter, CEO Sniqsys addressed the final and pre-final year students of CSE on job opportunities in the IT sector. Sniqsys is an IT consulting and engineering services company with offices in Trivandrum, Bengaluru, and London and clients from U.K., the U.S, and the Middle East. Mr. Sushil in his keynote address emphasized the importance of soft skills in securing and sustaining a job in the IT industry in today's competitive world. The CEO interaction session with students was organized by the Centre for Career Development, Ahalia School of Engineering and Technology

2023-24

TECHZONE

The iPhone 15 series, launched by Apple in September 2023, includes four models: iPhone 15, iPhone 15 Plus, iPhone 15 Pro, and iPhone 15 Pro Max, all featuring a refined design and a shift from Lightning to USB-C charging. The iPhone 15 and 15 Plus come with a color-infused glass back, Dynamic Island, a 48 MP main camera, bright Super Retina XDR displays, and are powered by the A16 Bionic chip, offering strong everyday performance and improved photography. The Pro models step things up with a lighter and stronger titanium frame, the customizable Action Button, and the powerful A17 Pro chip, Apple's first 3-nanometer processor, delivering top-tier performance and advanced graphics for gaming. Camera capabilities are also enhanced on the Pro models, with the iPhone 15 Pro Max standing out thanks to its 5× optical zoom using a tetraprism lens system. Across the lineup, Apple emphasizes better cameras, performance, safety features like Emergency SOS via satellite, and ecosystem consistency, making the iPhone 15 series a well-rounded upgrade for different types of users.

The Samsung Galaxy Z Flip5, unveiled at Samsung's Galaxy Unpacked 2023, is a stylish and powerful clamshell-style foldable smartphone that brings meaningful upgrades over its predecessor, including a significantly larger 3.4-inch Flex Window cover display for widgets, notifications, quick replies and camera controls without unfolding the phone, plus enhanced FlexCam features for creative selfies and hands-free photography; it folds flat thanks to a refined hinge design and sports a 6.7-inch Dynamic AMOLED 2X main display with 120 Hz adaptive refresh rate, is powered by the Qualcomm Snapdragon 8 Gen 2 for Galaxy chipset with 8 GB RAM and up to 512 GB storage, and includes a dual 12 MP rear camera system, 10 MP front camera, 3,700 mAh battery with fast wired and wireless charging, IPX8 water resistance, and runs One UI on Android — all packed into a compact, pocketable form factor emphasizing personalization and everyday usability.

Samsung's Galaxy Watch 6 series, launched in August 2023, was the flagship smartwatch lineup for that year, available in two main styles: the Galaxy Watch 6 and the more classic-styled Galaxy Watch 6 Classic. Both run on Wear OS Powered by Samsung with One UI Watch 5, and are powered by the Exynos W930 chipset with 2 GB RAM and 16 GB storage, delivering smooth performance and enhanced health tracking compared with previous models. The displays are bright Super AMOLED panels with larger screens and thinner bezels than before, improving readability and interactions outdoors. They include Samsung's BioActive Sensor suite for monitoring heart rate, ECG, blood pressure, body composition, and temperature, alongside advanced sleep tracking and fitness features. The Classic model brings back the rotating bezel for tactile control, while both offer LTE variants, comprehensive connectivity (Bluetooth, Wi-Fi, GPS), up to ~40 hours of battery life, and robust water and dust resistance (IP68/MIL-STD-810H) — making them well-rounded smartwatches for daily use and health monitoring.

GOOGLE GEMINI

Google Gemini AI was first officially introduced on December 6, 2023 when Google announced Gemini 1.0, its new advanced multimodal large language model designed to understand and generate not just text but also images, audio, and other data types.

At that launch, Google unveiled three variants — Gemini Ultra, Gemini Pro, and Gemini Nano — each optimized for different uses, from high-performance tasks to efficient on-device applications. The announcement marked Gemini as the successor to earlier Google AI systems and set the foundation for its integration into services like Bard (later rebranded), Search, Workspace, and Android devices.

Since then, Google has continued to develop the Gemini family with more capable versions over time, and Gemini now powers many of Google's AI features across products such as mobile apps, Search, and productivity tools

Gemini AI is a cutting-edge multimodal large language model (LLM) developed by Google AI and DeepMind that can understand and generate information across multiple formats including text, images, audio, video, and code — all within the same context. This makes it far more flexible than earlier AI systems that were limited to just text; Gemini can analyze a photo, reason about it, answer questions, write code, and even process video inputs seamlessly, thanks to its design from the ground up to handle diverse data types.

Google has released Gemini in several variants, such as Gemini Ultra (most powerful for complex tasks), Gemini Pro (balanced performance), and Gemini Nano (efficient for mobile/on-device use), allowing the AI to scale from high-end data center workloads to mobile experiences. The model powers Google's AI chatbot, also called Gemini, which replaced Bard and is integrated across many platforms including web, mobile apps, and Google services like Search, Docs, Gmail, and Pixel phones, helping with everything from drafting text to summarizing content and generating creative outputs.