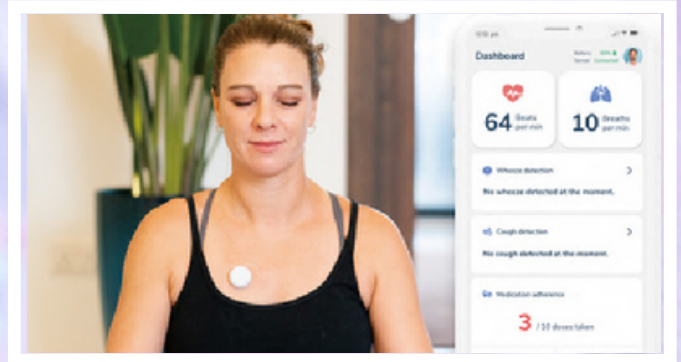




Byte Quest

Department of
CSE



Department Vision

To be a center for academic excellence in the field of Computer Science and Engineering education to enable graduates to be ethical and competent professionals.

FACULTY COORDINATORS

DR. BHARGAVI PEDDIREDDY
(ASSOCIATE PROFESSOR)
S. KOMAL KAUR
(ASST. PROFESSOR)

Department Mission

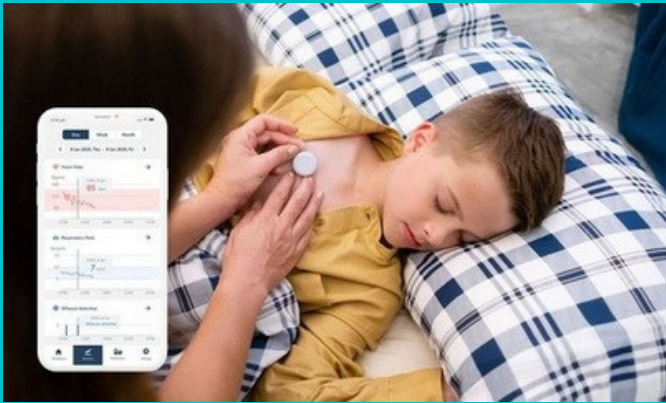
To enable students to develop logic and problem solving approach that will help build their careers in the innovative field of computing and provide creative solutions for the benefit of society.

STUDENT COORDINATORS

G. Shivaji Ganesh (2/4)
G. Vikas (2/4)



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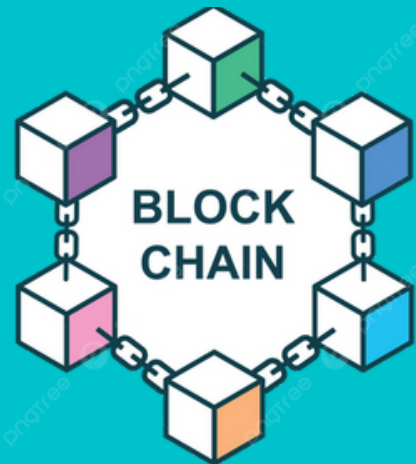


AeviceMD

AeviceMD is a smart, wearable stethoscope developed by Aevice Health, a Singapore-based MedTech company. This device is designed to monitor chronic respiratory diseases like asthma and COPD. It uses AI to detect abnormal lung sounds and provides real-time data to healthcare professionals. The AeviceMD is non-invasive and battery-operated, making it convenient for use both at home and in clinical settings. It has received clearance from the U.S. FDA as a Class II medical device, allowing it to be marketed and used widely. The device aims to improve patient outcomes by enabling early detection and continuous monitoring of respiratory conditions.

INTEROPERABILITY

Blockchain interoperability refers to the ability of different blockchain networks to communicate and exchange data with each other. This capability is crucial for the growth and development of blockchain technology, as it allows for the seamless transfer of assets and information across various blockchain platforms



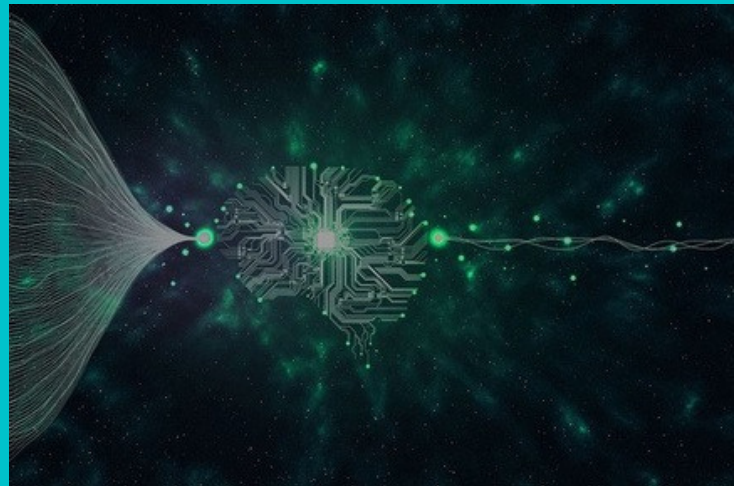
interoperability is achieved through cross-chain messaging protocols, which enable blockchains to read data from and write data to other blockchains. This allows for the creation of cross-chain decentralized applications (dApps) that can function across multiple blockchain networks. For example, token bridges facilitate the transfer of tokens between different blockchains, while more advanced protocols support complex applications like cross-chain decentralized exchanges (DEXs) and decentralized finance (DeFi) platforms. The development of blockchain interoperability is essential for creating a more connected and efficient blockchain ecosystem, enabling diverse blockchain networks to work together and unlock the full potential of decentralized technologies.



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BATTERYLESS SENSORS

Batteryless sensors are devices that operate without traditional batteries by harvesting energy from their environment, such as solar, thermal, kinetic, or radio frequency energy. These sensors are designed for ultra-low power consumption and can function autonomously, making them ideal for various applications.



Batteryless sensors operate by harnessing energy from their environment, such as solar, thermal, kinetic, or radio frequency sources. They convert this ambient energy into electrical power through devices like photovoltaic cells, thermoelectric generators, piezoelectric elements, or RF antennas. This power is managed and stored to ensure a steady supply for the sensor's operation. These sensors then gather data from their surroundings, like temperature, humidity, or pressure, and transmit this data wirelessly to central systems for analysis. This process enables them to function autonomously and sustainably, making them ideal for applications in agriculture, healthcare, smart cities, industrial automation, environmental monitoring, and smart homes where battery maintenance is impractical. In agriculture, they monitor soil conditions and crop health. In healthcare, they power wearable devices that track vital signs. Smart cities use them for streetlights and traffic signals, while industrial settings rely on them for equipment and environmental monitoring. Additionally, they are utilized in environmental monitoring to track air quality and water levels, and in smart homes for automation systems like thermostats and lighting controls. By eliminating the need for battery replacements, batteryless sensors offer sustainable, efficient, and maintenance-free solutions for IoT applications.



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SUSTAINABLE AVIATION FUEL

Sustainable Aviation Fuel (SAF) is a type of biofuel designed to reduce the carbon footprint of aviation. It is produced from sustainable feedstocks such as cooking oil, animal waste fat, agricultural and forestry waste, and municipal waste. SAF can reduce carbon emissions by up to 80% compared to traditional jet fuel over its lifecycle.



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