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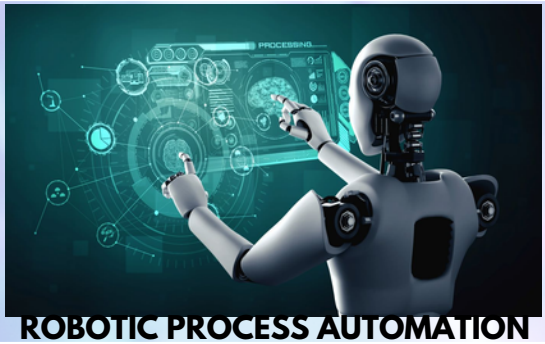
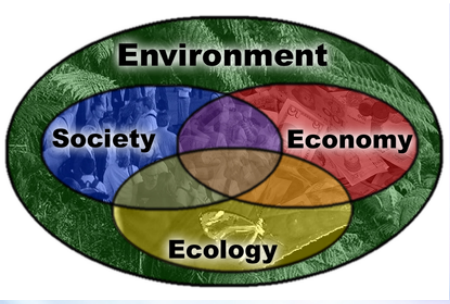
Byte Quest

Department of CSE



ROBOTIC PROCESS AUTOMATION

DIGITAL FORENSICS



COMPUTATIONAL SUSTAINABILITY

EDGE COMPUTING SECURITY

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.

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.

FACULTY COORDINATORS

KOMAL KAUR
ASSISTANT PROFESSOR
DR. BHARGAVI PEDDIREDDY
ASSOCIATE PROFESSOR

STUDENT COORDINATORS

TALLURI CHANDRA KIRAN (3/4) CSE C
AMOGHA KANDURI (3/4) CSE C

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RPA

Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. Just like people, software robots can do things like understand what's on a screen, complete the right keystrokes, navigate systems, identify and extract data, and perform a wide range of defined actions. But software robots can do it faster and more consistently than people, without the need to get up and stretch or take a coffee break.

RPA technology is changing how the world gets work done.
Software robots—instead of people—do repetitive and lower-value work, like logging into applications and systems, moving files and folders, extracting, copying, and inserting data, filling in forms, and completing routine analyses and reports. Advanced robots can even perform cognitive processes, like interpreting text, engaging in chats and conversations, understanding unstructured data, and applying advanced machine learning models to make complex decisions.

DIGITAL FORENSICS

Digital forensics is a branch of forensic science that focuses on identifying, acquiring, processing, analysing, and reporting on data stored electronically. Electronic evidence is a component of almost all criminal activities and digital forensics support is crucial for law enforcement investigations.
Electronic evidence can be collected from a wide array of sources, such as computers.

- Operational support: specialized forensics assistance can be provided at the INTERPOL Digital Forensics Laboratory and in the field during Incident Response deployments.
- Guidance: we assist member countries in building and maintaining state-of-the-art laboratories compliant with internationally adopted procedures, to better support investigations and prosecutions.
- Capacity building: we develop training programmes focusing on standard methodologies and solutions in digital forensics, in close cooperation with the INTERPOL Capacity Building Unit and with our partners from law enforcement, the private sector and academia.

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COMPUTATIONAL SUSTAINABILITY

Computational sustainability is an emerging field that attempts to balance societal, economic, and environmental resources for the future well-being of humanity using methods from mathematics, computer science, and information science fields.

Using the power of computers to process large quantities of information, decision-making algorithms allocate resources based on real-time information. Applications advanced by this field are widespread across various areas. For example, artificial intelligence and machine learning techniques are created to promote long-term biodiversity conservation and species protection.[4][5] Smart grids implement renewable resources and storage capabilities to control the production and expenditure of energy. Intelligent transportation system technologies can analyze road conditions and relay information to drivers so they can make smarter, more environmentally beneficial decisions based on real-time traffic information.

The field of computational sustainability has been motivated by Our Common Future, a 1987 report from the World Commission on Environment and Development about the future of humanity.[9] More recently, computational sustainability research has also been driven by the United Nation's sustainable development goals, a set of 17 goals for the sustainability of human economic, social, and environmental well-being world-wide.

Researchers in computational sustainability have primarily focused on addressing problems in areas related to the environment (e.g., biodiversity conservation), sustainable energy infrastructure and natural resources, and societal aspects (e.g., global hunger crises).[2]

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EDGE COMPUTING SECURITY

Edge computing is the deployment of computing resources outside the data center, close to the point of activity that the computing supports, where a series of connected devices such as IoT elements link the edge device to users or applications

Edge computing security is the process of providing whatever additional security is required to bring edge security up to data center standards for security and compliance. That means securing access to edge devices, both physically and through a user interface, in a way that is as effective as prevailing data center technologies, but suitable for deployment outside the data center.

Edge computing doesn't always add risk. Most edge applications are variants on M2M or IoT, which means they rely on simple devices with limited built-in security features. By terminating the connection to these devices locally and applying more traditional encryption and access security protection on the connection between the edge and the cloud or data center, edge computing reduces the vulnerable attack surface of applications.

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