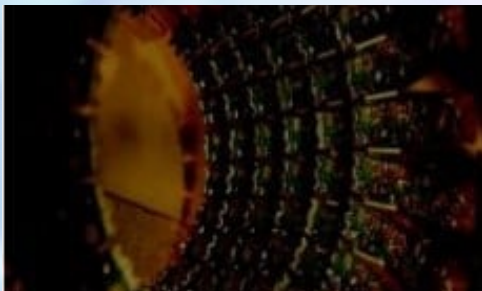# Byte Quest

Department of **CSE**

ROBOTIC PROCESS AUTOMATION

EMOTIONAL RECOGNITION TECHNOLOGY

PARASITIC COMPUTING

CHILD TRACKING SYSTEM

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

S. KOMAL KAUR   (ASST. PROFESSOR)
T. NISHITHA   (ASST. PROFESSOR)

STUDENT COORDINATORS

CHANDRASHEKAR (2/4) CSE B
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AKASH (3/4) CSE C
ANISHA (4/4) CSE B

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ROBOTIC PROCESS AUTOMATION

Robotic process automation (RPA) is the application of technology that allows employees in a company to configure computer software or a "robot" to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems.Any company that uses labor on a large scale for general knowledge process work, where people are performing high-volume, highly transactional process functions, will boost their capabilities and save money and time with robotic process automation software.

According to Harvard Business Review, most operations groups adopting RPA have promised their employees that automation would not result in layoffs. Instead, workers have been redeployed to do more interesting work. One academic study highlighted that knowledge workers did not feel threatened by automation: they embraced it and viewed the robots as team-mates. The same study highlighted that, rather than resulting in a lower "headcount", the technology was deployed in such a way as to achieve more work and greater productivity with the same number of people.

EMOTIONAL RECOGNITION TECHNOLOGY

Have you ever noticed the exact thoughts of your mind reflecting on your phone screen on some random Instagram page or twitter or any other social media. You may call it is as co-incidence but think about it. It's not just a coincidence how come your phone will able to know what you need or what are you thinking it's just an electronic device how it will read your thoughts. This is because the special algorithm used by that particular social media . which is mainly by using AI .

Emotion recognition is identifying the human emotions.Decades of scientific research have been conducted developing and evaluating methods for automated emotion recognition. There is now an extensive literature proposing and evaluating hundreds of different kinds of methods, leveraging techniques from multiple areas, such as signal processing, machine learning, computer vision, and speech processing. Different methodologies and techniques may be employed to interpret emotion such as Bayesian networks., Gaussian Mixture models and Hidden Markov Models and deep neural networks
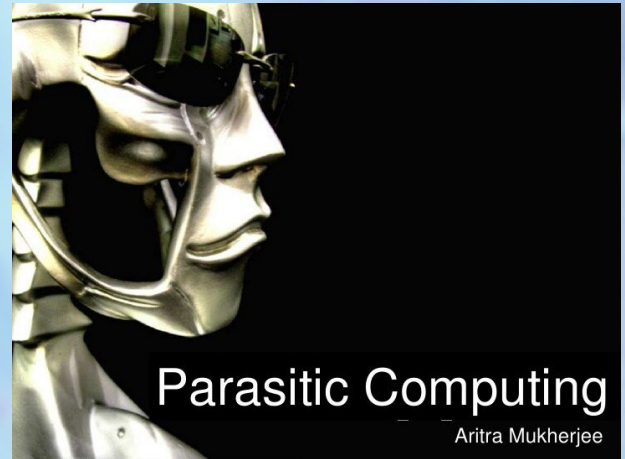
PARASITIC COMPUTING

Parasitic computing is programming technique where a program in normal authorized interactions with another program manages to get the other program to perform computations of a complex nature. It is, in a sense, a security exploit in that the program implementing the parasitic computing has no authority to consume resources made available to the other program.It was first proposed by Albert-Laszlo Barabasi, Vincent W. Freeh, Hawoong Jeong & Jay B. Brockman from University of Notre Dame, Indiana, USA, in 2001.

Parasitic Computing
Aritra Mukherjee

This programming technique where a program in normal authorized interactions with another program manages to get the other program to perform computations of a complex nature. It is, in a sense, a security exploit in that the program implementing the parasitic computing has no authority to consume resources made available to the other program.

The example given can also be two computers communicating over the Internet, under disguise of a standard communications session. The first computer is attempting to solve a large and extremely difficult 3-SAT problem; it has decomposed the original 3-SAT problem in a considerable number of smaller problems. Each of these smaller problems is then encoded as a relation between a checksum and a packet such that whether the checksum is accurate or not is also the answer to that smaller problem. The packet/checksum is then sent to another computer. This computer will, as part of receiving the packet and deciding whether it is valid and well-formed, create a checksum of the packet and see whether it is identical to the provided checksum. If the checksum is invalid, it will then request a new packet from the original computer. The original computer now knows the answer to that smaller problem based on the second computer's response, and can transmit a fresh packet embodying a different sub-problem. Eventually, all the sub-problems will be answered and the final answer easily calculated.Parasitic computing moves computation onto what is logically the communication infrastructure of the Internet, blurring the distinction between computing and communication. The Notre Dame scientists have shown that the current Internet infrastructure permits one computer to instruct other computers to perform computational tasks that are beyond the target's immediate scope. Enabling all computers to swap information and services they are needed could lead to unparalleled emergent behavior, drastically altering the current use of the Internet.

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CHILD TRACKING SYSTEM

Child safety is becoming an increasingly important issue. Parents are concerned about the security of their children every second they are away from them. The busy and stressful lives we lead makes it difficult to follow the kids and keep a track on them by constantly asking for minute-to-minute updates. The C Tracker is an intelligent application that ultimately aims for the prevention and protection against child abuse and to ensure their safety and security; especially for the school going ones.
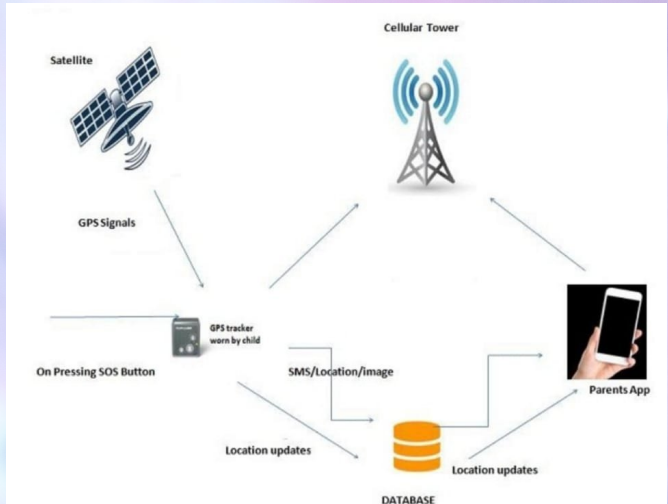
There exist various types of vehicle trackers which are hidden under the chassis and can be remotely activated. The technology used for the purpose of tracking in almost every device is mainly GPS-based. In a similar way, the child tracking system captures the GPS location information at certain regular intervals and then sends it to the central server. This is done via cellular data service like GPRS (General Packet Radio Service). The coordinates are immediately transferred to the tracking company through a GSM (Global System for mobile communication) cellular network. Before being used by the operators, all the information is downloaded and collected in the data centre. This helps to check the vehicle's overall performance. Customers (here parents) can access the data on the company's website, which enables them to track the movement of the child's vehicle on a real-time basis.The very important advantage of the system is that, the parent will receive alert message to their preset phone number even if the parent is offline. Also, the application provides the facility to send a pre-alert message to the saved numbers in case, if the child feels any source of insecurity.

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