UBIQUITOUS COMPUTING AND SIGNAL PROCESSING RESEARCH GROUP

UCSP

UBIQUITOUS COMPUTING AND SIGNAL PROCESSING

2022-23

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UCSP-Ubiquitous Computing and Signal Processing

ABOUT US

- Our club includes all domains like Software and Hardware and includes objectives of all engineering branches.
- It is basically a project oriented student club and we plan alot of projects from our club
- There is space for students to showcase their skills in various aspects as we conduct coding competitions, technical contests, project exhibitions, etc.
- Beside all these, our club also conducts many technical and non technical events, also includes tech talks from popular resource persons.
- All these make UCSP stand as a unique and interesting club of our college.

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VISION

- Involvement, Dedication, Leadership development, Enthusiasm, are the things which enable all students to contribute to a better society.
- Our main motive is for building a strong foundation of theory and research to engage undergraduate, graduate and professional students in meaningful opportunities that enhance their academic experience.
- To identify the needs and problems of the community and involve them to develop problem-solving skills.
- To develop competence required for group-living and sharing of responsibilities.
- Creating awareness about entrepreneurship and support to create innovative project plans.

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GOALS

- Here you have an opportunity to learn about yourself, your strengths and weaknesses, your goals in life, and more.
- The main goal of our club is to make an indivisual aware of all these things and to brainstorm and make them come up with new and different ideas, it might be in projects or planning an event.
- There is an opportunity for everyone to find what they actually enjoy, how they multitask, stay focused & organized, serve others and even generate ideas.
- our main purpose is to enhance the co-ordination and communication between indivisuals in a team.
- We believe that teamwork helps to improve the softskills of each and every person.

our past events

- Workshop on data analysis using SQL
- Codezilla
- Cryptography in projects
- Technopedia
- Workshop on Image processing & its applications
- Lockdown saga
- GIT WIT
- Workshop on Web Development

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OUR PAST PROJECTS

- Fingerprint security using Image processing
- Automatic parking slot indicator system
- Smart alarm system
- Bluetooth controlled robotic car
- Pulse detecting device
- Line follower robot
- Colour differentiators
- IOT enabled power management system

TOTAL 47 PROJECTS

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OUR FUTURE PROJECTS

- Smart Door Lock System -

  We'll be using finger print sensor to open and close the door.
  The components : Arduino, finger print sensor, DC gear motor, relay.

- Self-Driving Car: (Using Raspberry Pi) -

  a self-driven vehicle, It runs on different level of automation the objective of such cars is to create safe driving experience for not just the passenger but the entire community.

  Components : Robo car jersy kit, motor driver, microcontroller (Raspberry Pi), Camera module, Power bank.

OUR FUTURE PROJECTS

- Chess Game (WebD) -

  It’s a well-designed game built to play in a very interactive environment,

  This project is built to predict human moves and accordingly, it takes action.

  you can even play with friends and with the computer as well.

- Heart rate monitoring devices -

  It is a device that measures your heart rate, or pulse in beats per minute (BPM). In this project we use an Arduino based heartbeat monitor. It uses a heartbeat sensor module to sense the heartbeat upon putting a finger on the sensor.

  Components: Arduino, Heart beat sensor module, 16x2 LCD, Push button, Bread board, Power , Connecting wires.

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OUR FUTURE PROJECTS

- ChatBots -

  Chat bots are simulations which can understand human language, process it and interact back with human while performing specific task.

  Top Applications are: 1. Help desk assistant 2. Email distributor
  3. Phone/Home Assistant.

- Drone -

  Flying robot that can be remotely controlled or fly autonomously using software-controlled flight plans in its embedded systems, that work in conjunction with onboard sensors and a global positioning system (GPS).

  Various application of drone in agriculture:

Terrain Mapping,Soil and Field Analysis,Crop Spraying,Crop Mapping and Surveying.

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FUTURE EVENTS

- Hands on session On Arduino Programming
- Project Presentation Competition & Exhibition
- Website Design Competition - only frontend
- Coding Contests
- Building Projects Using Python
- UCSP Fest - 6 days
- Hands on session on LT Spice
- Fun Events- Sight On site, just Imagine, Cartooning and lot more

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LET'S WORK TOGETHER

Thank You!

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