IEEE
SIGNAL PROCESSING SOCIETY
VELLORE INSTITUTE OF TECHNOLOGY

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@IEEE_SPS_VITV

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VIT VELLORE

QUICK FACTS

*Recognized as an Institute of Eminence (IOE) by MHRD, Government of India.

*VIT has been ranked among the TOP20 Universities in the countryfor the fourth time consecutively by NIRF.

*No.1 Private University for Innovation (2019) as recognized by ARIIA , Government of India.

*33 Undergraduate

*36 Postgraduates

*15 Research programs are offered in the AY 2019-2020.

*Over 36,000 students, with nearly one third of them are women, 1700 faculty and 1090 staffs.

IEEE SPS

QUICK FACTS

*The Society organises numerous conferences around the world every year, focusing on the innovations shaping the future of signal processing and the future of our world.

*Members have opportunities to be involved in boards and committees, and at the local level members are actively immersed in regional chapters , working on issues and projects that shape what's next in signal processing .

*SPS serves its members through high quality publications, conferences, technical and educational activities, and leadership opportunities. Its goal is to keep members abreast of the latest information and to serve the public at large .

IEEE Signal Processing Society

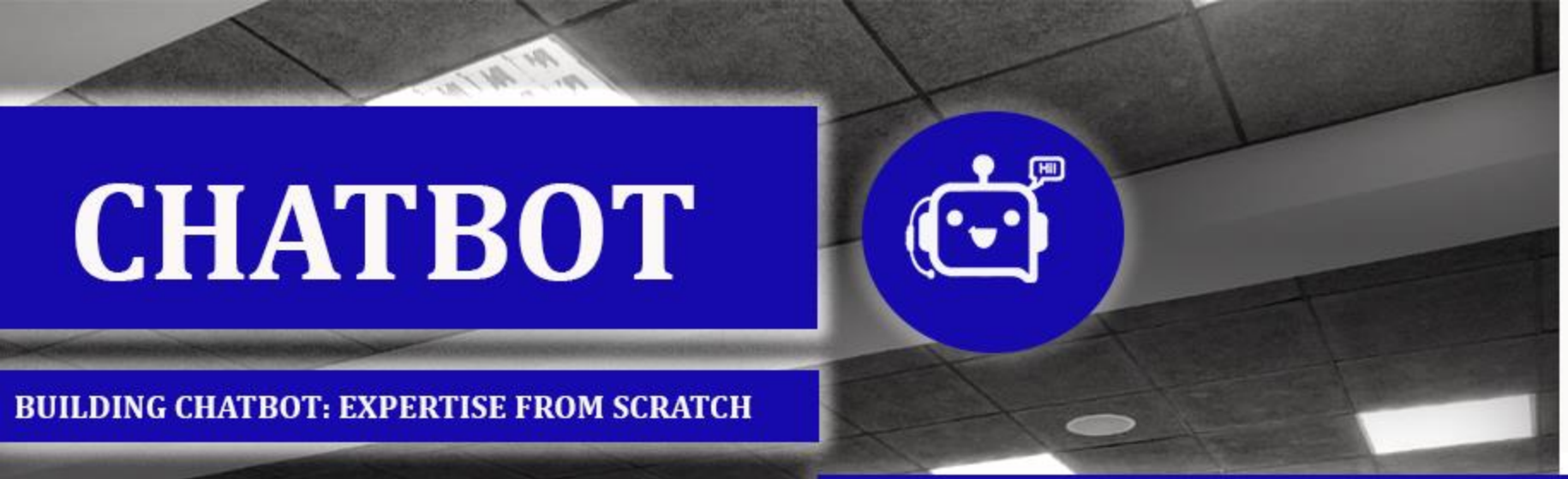
ABOUT THE HACKATHON

HackX is a premium 36- hours hackathon to be organised by IEEE-SPS,vit student chapter. With the aim of providing aspiring engineers and tech enthusiasts a platform to showcase their skills, this hackathon will promote development and exchange of scientific knowledge. It envisions to maximise creativity,competitiveness and efficiency among the participants.Students from all over VIT University and even external universities will be invited to be a part of this technical extravaganza. The hack will recognise the best projects and award them for their excellence.

OUR PREVIOUS EVENTS

CHATBOT

BUILDING CHATBOT: EXPERTISE FROM SCRATCH



Our predecessors endeavoured to make men into machines, we are endeavouring to make machines into men" - as once said by Charles Edward Jerningham is proved right by intelligent technologies like Ok Google, Hey Siri or Hi Alexa! Ever wanted to have your very own virtual assistant? This workshop taught students to make their way to AI with concepts like Machine learning, Natural Language Processing and API integration and fabricate your own assistant. Come, join us to amplify your experience and efficiency in these fields of technology and also get a chance to win exciting cash prizes!!!

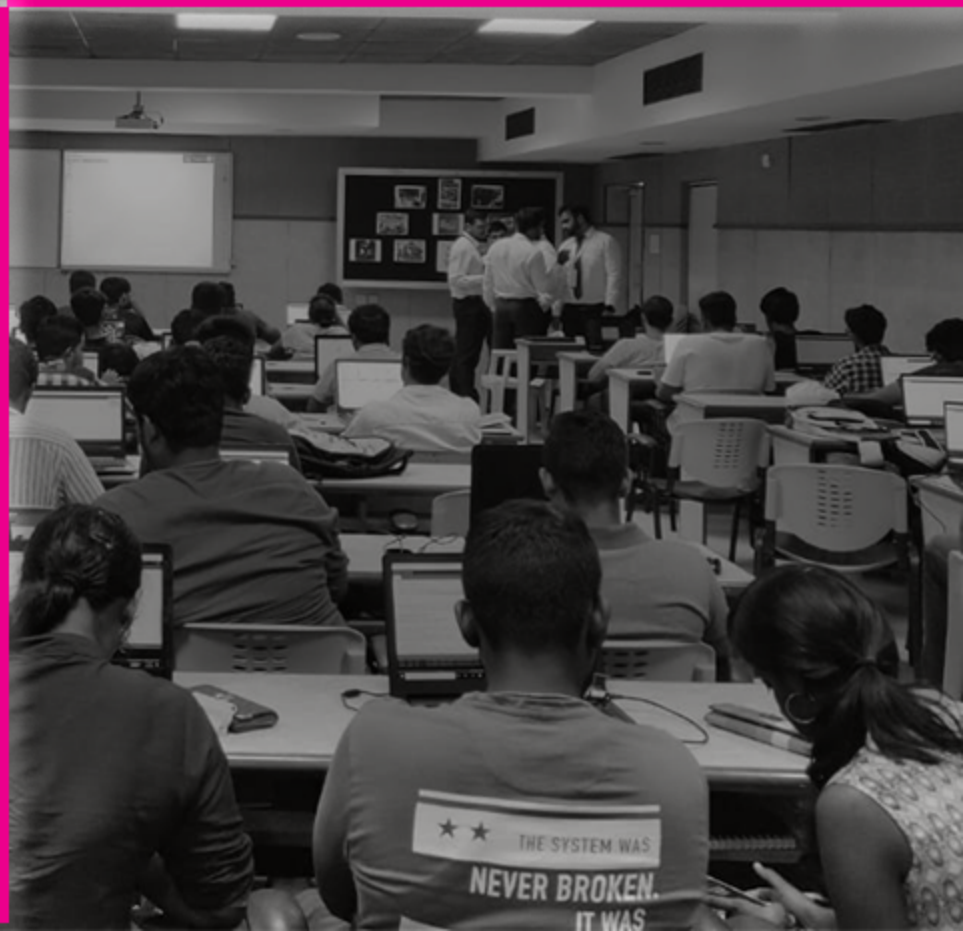
GITHUB

EXPLORE THE GIT!

Ever wondered how Github really worked? This one-day workshop is a concise yet resourceful gateway into the world of Open Source Community. Participants will be introduced to an incredibly powerful tool for easy collaboration: The GitHub Platform.

This workshop helped to get acquainted with the basics of GitHub navigation and the best practices available for developing projects. It provided a hands-on experience for creating and using git repositories, starting and managing branches, adding files to environments, commits and opening and merging pull requests!

The workshop ended in an eventful hack where everyone got to showcase their skills and get awarded!



SELF DRIVING CAR

IMAGINE INNOVATE INSPIRE

Self-driving cars are one of the hottest zones for both business and technology. In this workshop participants were taught how different sensors used in the autonomous car are used for interpreting sensory information to identity navigation paths, avoid obstacles and read relevant markers, like road signs and traffic light. Participants learned how cars develop the map of the road, how it adjusts its speed, or how it senses the change in weather. And the most important how cars use the camera to process the video and how videos are segmented in frames and processed using CNN.

IBM DEV

IBMDEV was an event conducted by IEEE SPS vit for educating students regarding concept of cloud computing. Kits of node mcu and few sensors were provided and they were taught to interface the same with the very useful node red platform. They were also given insights into ibm's other similar features available through ibm watson account by renouned experts in the domain. The event was an hands on session and participants could develop their own projects using the same platform by the end of the event.

OUR EVENTS

OUTREACH

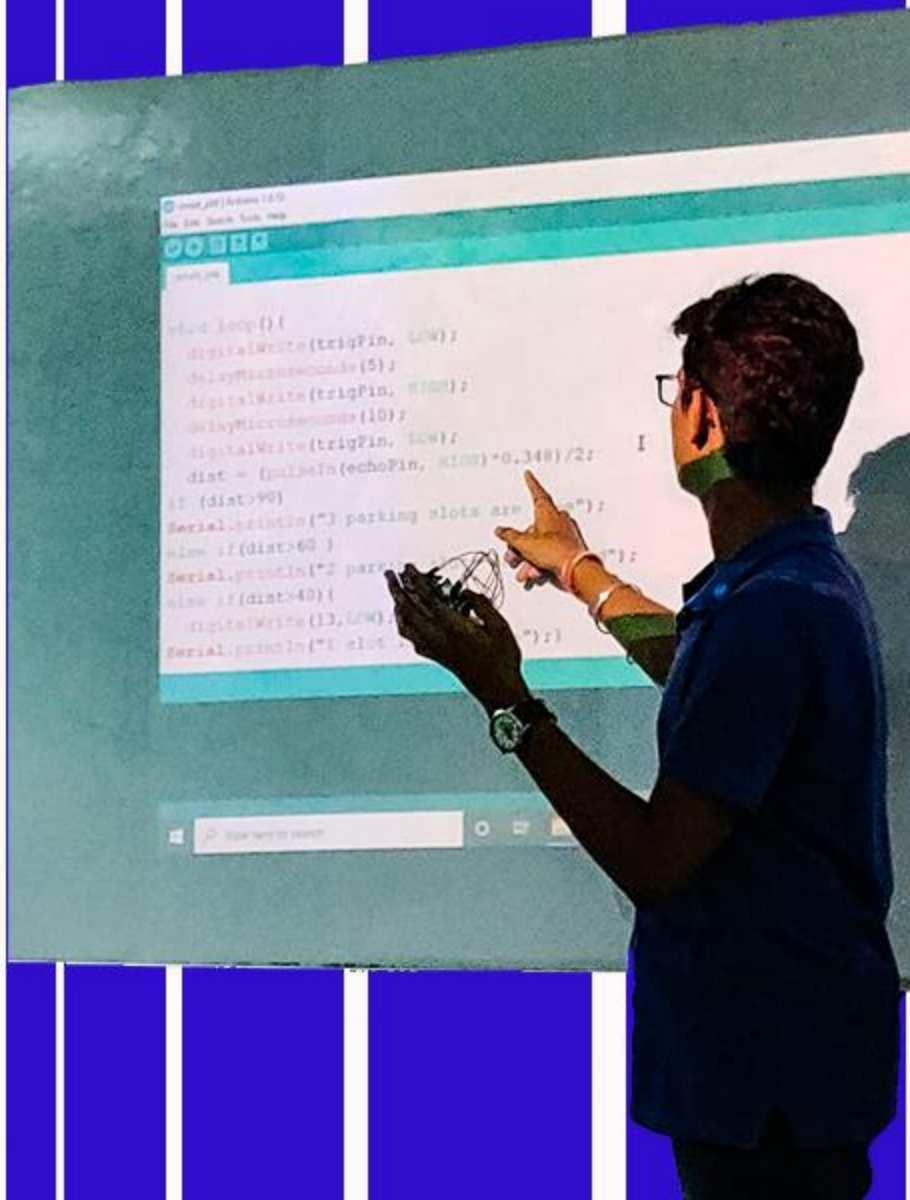
IEEE SPS, VIT VELLORE

Every attempt has been made by the Management and other administrative boards of VIT to assure that every students finds VIT a very lovely , fun and resourceful community to employ their erudite years. Through the event sand Outreach by clubs and chapters, students are not simply revealed to the university but also with reputed colleges and universities in and around the country.

OUTREACH

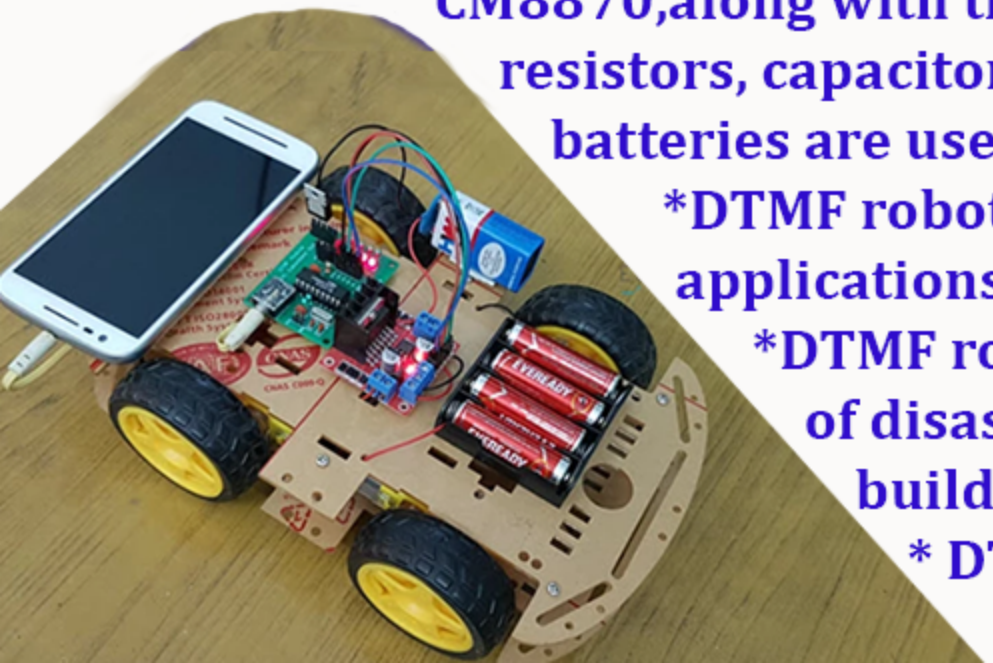
SOME OF OUR PROJECTS

* DTMF CONTROLLED ROBOT
*R-Pi MUSIC PLAYER
*OBSTACLE AVOIDING VEHICLE
*Speech Signal Reformation using Firefly Algorithms
*Digital Extraction of Brain tumor from MRI using MATLAB
*Face Recognition
*Analysing Foot neuropathy of Diabetic person using Arduino
*Smart gloves for the communication of the deaf and mute and smart stick for the blind



DTMF CONTROLLED ROBOT

DTMF is an acronym for Dual Tone Modulation Frequency. When a key is pressed on the mobile phone, it generates a tone which is a combination of two frequencies. Of the two frequencies, one is a high frequency and another one is low frequency. This frequencies can be decoded by the decoder IC into a binary sequence. Using this binary sequence, the robot is controlled. The decoder used in this circuit is CM8870,along with that a Motor Driver IC (L293D or L298N), resistors, capacitors, crystal oscillator, motors, chassis and batteries are used. Its applications are:



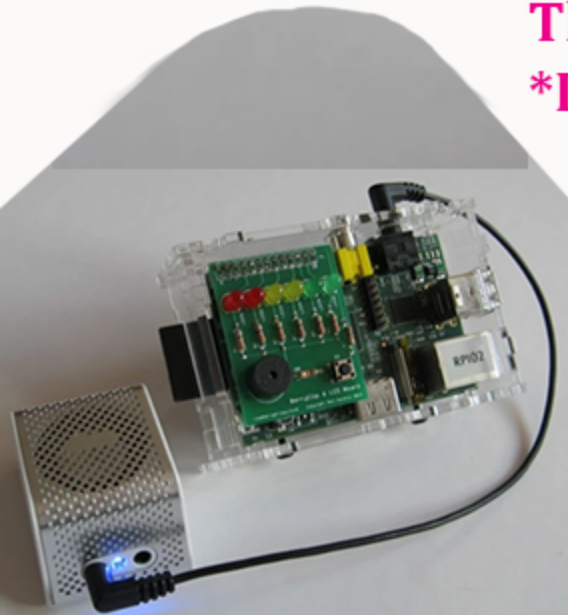
*DTMF robot with slight modifications can be used in industrial applications.

*DTMF robot with a human detector sensor can be used at the time of disasters like an earthquake to detect the human under buildings.

* DTMF robot with a camera can be used in surveillance systems.

R-Pi MUSIC PLAYER

R-Pi Music Player or Raspberry Pi Music Player is a device which enables us to control our music player remotely from any place. It is a customized audio player which supports 3.5mm Audio Jack along with Bluetooth support. This project is for technoenthusiasts who are also audiophiles and love to come up with new things to enrich their daily livelihoods. It requires Raspberry Pi, a memory stick, a card reader, power supply and a speaker.



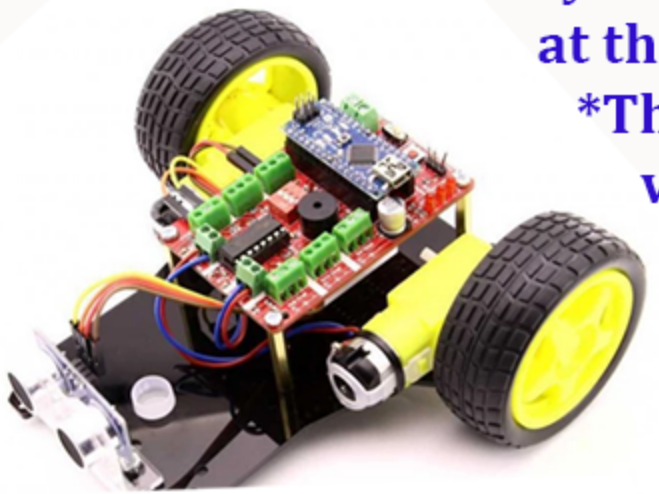
The advantages of using your own R-Pi Music Players are:-

*It can be customized as per your requirements. You can add support for 3.5mm jack, USB, bluetooth, and even add casting support using Raspicast and SSH server.

* Getting to learn about R-pi and various methods and features of it to apply them in new projects

OBSTACLE AVOIDING VEHICLE

An Obstacle Avoiding Robot is a type of autonomous mobile robot that avoids collision with unexpected obstacles. To achieve this feat our robot uses Ultrasonic sensors. The design allows the robot to navigate in unknown environment by avoiding collisions, which is a primary requirement for any autonomous mobile robot. The project utilizes an Arduino, ultrasonic sensors, L298D Motor Driver IC, vehicle chassis. Even though Obstacle Avoiding Robot is a simple project, its applications are not limited. Some of them are:-



*By modifying the robot and adding custom fittings such a cleaning brush at the bottom, it can be used Automatic Home Cleaning Robot.

*The main concept can easily be implemented in parking lots and vehicles to avoid collisions while taking them in and out of the lots.

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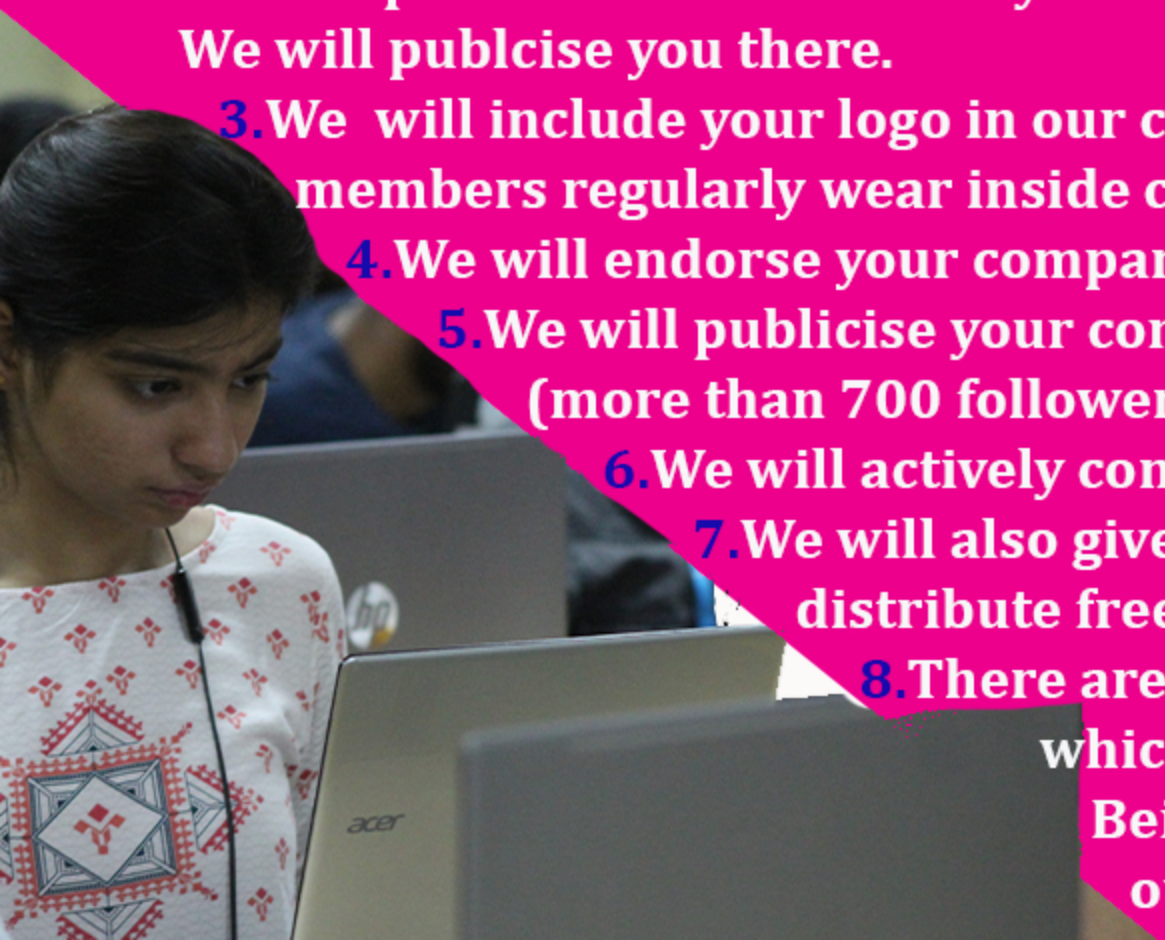
8. There are around 200+ Club and Chapters at VIT University which constitute around10,000 members (adjunctionall) Being a VITian, we would promote your company on our pages.



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LOGO ON POSTER		✓	✓
LOGO ON T-SHIRT			✓
Increase your company's Google rating			✓

OUR GALLERY

VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

IEEE Signal Processing Society

THANKS !!

Do you have any questions?

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