Research Projects and Paper Publications

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Title	Publisher	Conference	Status
COVID-19 Public Screening System	IEEE	IEEE CONECCT 2021	**Published.** **Link:** https://ieeexplore.ieee.org/document/9622652 **Citation:** S. Abhishek, A. Sharma and S. Sivakumar, "End to End COVID-19 Public Screening System," 2021 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2021, pp. 1-7, doi: 10.1109/CONECCT52877.2021.9622652.
IoT Based Control System for Home Automation	IEEE	TEMSMET 2021	**Accepted. Soon to be published.**
FANET Routing Survey: An Application Driven perspective	Lecture notes in Electrical Engineering (SPRINGER)	VICFCNT 2021	**Accepted. Soon to be published.**
Anti-Abduction System for The Vulnerable	IEEE	TEMSMET 2021	**Accepted. Soon to be published.**

Projects:

1. **Yocto based Embedded Linux System build for Health Care devices –** Currently interning at Sanmina Corporation, Chennai working on Embedded Systems designing, building and deploying full scale systems based on embedded Linux for primarily for Health Care and Medical Devices.
2. **IoT based Control System for Home Automation** – This project focussed on using Embedded System technology to convert any ordinary electrical appliance into a smart device by offering a secure way to remotely control the device with the help of IoT functionality. A small-scale Electrical System was built to test the system design. I was able to develop a low-cost, efficient and secure way to remotely control any electrical device. A research paper on the same project was accepted at the IEEE Second International Conference on Technology, Engineering, Management for Societal impact using Marketing, Entrepreneurship, and Talent.
3. **graphFramework** – An open-source C++ Library for graph data structure Open-Source Library for graph data structure. This project has the most used algorithms pertaining to Graphs and Trees. These algorithms are designed and implemented in such a way that any third-party user can implement them in their own project with ease.

4. **End to End COVID-19 Public Screening System** – Research paper submitted and accepted at the IEEE CONECCT 2021 Conference. The proposed system in this project can detect face masks from a live video feed, also can detect common violations and is capable of sending messages to the administrator when a violator is detected.
5. **Design and Analysis of Anti-Lock Braking system** – This project was done as a part of Control Systems course. In this project I successfully designed and modelled a realistic Anti-Lock Braking System (ABS) that are found in automobiles using the concepts of Control Theory and Feedback mechanisms. In the end, I compared and analysed how ABS affects a vehicle in different environmental conditions. This modelling and designing were done using MATLAB and Simulink.
6. **Gender Identifier by Voice Analysis using MATLAB and Signal Processing** – This project won "The Best Project" award at the Open House in 2019. The system built was designed to identify the gender using the real time speech signal using MATLAB. The concept of correlation was used to achieve the desired result. This project had an accuracy of 97%.