MOHIT PALLIYL SATHYASEELAN

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OBJECTIVE

Seeking internship opportunities in the field of Embedded hardware/software and IoT systems.

EDUCATION

Master of Science, Electrical and Computer Engineering August 2021 - Present
University of Florida, Gainesville, FL GPA 3.2/4

Bachelor of Engineering, Electronics and Communication Engineering July 2017 - June 2021
Vellore Institute of Technology, Amaravathi,India GPA 4/4

Coursework

Parallel Computer Architecture, Advanced System Programing, IoT Privacy and Security, Reconfigurable Computing, Fundamental of Machine Learning, Image processing and Computer Vision, HDL Verification and methodology, Embedded hardware software system design, Data acquisition and transmission system, Embedded Programming.

SKILLS

Programming Languages : C++, Python, VHDL, MATLAB, UVM (Universal Verification Methodology), Embedded C
Software worked with : NI Labview, Proteus, Vivado, ModelSim, Jupyter Notebook
Hardware worked with : ZedBoard (Virtex7 FPGA) ,OMRON PLC - CJ2M-CPU33, Nadesco AC controller, Fanuc controller - R-30iB, Raspberry Pi, Aurduino, Esp.

PROFESSIONAL EXPERIENCE

WIN AUTOMATION (Intern) January 2021- June 2021
Worked with the IoT solutions division. Built Medsmart – an IoT device used for COVID applications.
Collaborated on the FANUC project - implemented an IoT layer for industrial communication. (TCP, UDP)
Project related to NVIDIA jetson - UGV application

MINDTECK (R&D Intern) June 2018 - July 2018
Assisted the CTO in building a BLE-based solution to track assets within an enclosed area.
Foundation of triangulation was crucial here requiring at least three Raspberry Pi's for the working of the system.
Collected and tested RSSI values for every one meter to help the system reach its accuracy.

RESEARCH PAPER

IoT Based COVID De-Escalation System Using Bluetooth Low-Level Energy (ICICT- 2021)
An IoT Device, which predicts COVID-19 cases in that proximity of the device using pre-existing data collected in the database.

ACADEMIC PROJECTS

1-D Time-Domain Convolution using FPGA
Implemented a custom accelerator circuit on FPGA to obtain 1-D convolution. Optimized circuit to a 14x speed with parallelism with respect to software implementation of the proposed convolution
Hardware : ZedBoard (Virtex7 FPGA)

Handwritten Symbol Classification using Convolutional Neural Network
Designed a Convolutional Neural Network for a custom handwritten data set.
Evaluated other methods of classification. Improved model, to provide 94% accuracy.

Image Segmentation and Recognition of Vehicle Plates using Image processing techniques
Designed a model to accurately predict any vehicle's plate number using Tesseract Engine.
Implemented various Image processing techniques to improve the accuracy.

Ornithopter
A mechanical aircraft, which obeys the flapping mechanism of birds. Alternative for drones in the UAV field. Hardware and Software used Arduino MCU, Brushless and servo Motors, ESC, 3D printing for cranks, 900mAh LiPo battery, camera module.

Smart Weather station
Used Raspberry Pi and other elemental sensors to provide a home-based weather system. Hardware and Software used Raspberry Pi,BME280 humidity, pressure and temperature sensor, MCP3008 ADC, anemometer.

VR SKATEBOARD (Shortlisted in top 20 in Engineering Clinics)
AR Project- skateboard experience for the disabled. Hardware and Software used Arduino UNO, MPU-6050 Accelerometer/Gyroscope, VR- Headset

VISA STATUS: Currently on F1 Visa, Applying for GC via parents.