Shanmukha **Saketha Ramanujam** S

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Education

M.S. by Thesis in Electrical Engineering **A.S.U., Tempe, AZ**
Concentration: RF Engineering *Expected graduation: Fall 2022*
CGPA: 3.0/4.0

Bachelor of Technology **G.V.P.C.E (A), Vizag, IN**
Concentration: Electronics and Communications Engineering *2019*
CGPA: 7.92/10

Relevant Graduate Coursework

mmWave and THz Measurements ▪ Microwave Engineering ▪ Coherent Optics ▪ Random Signal Theory

Technical Skills

Languages: Python ▪ Shell ▪ C ▪ MATLAB ▪ JavaScript
Platforms: Linux ▪ Arduino ▪ Raspberry Pi ▪ Pocketbeagle
Tools: HFSS ▪ ADS ▪ LabView ▪ Eagle ▪ Oscilloscope ▪ Multimeter ▪ TI Cascade Radar

Professional Experience

Student Researcher | Terahertz Research Lab, A.S.U. Summer 2021 – Present
Technologies: Radar Imaging, Beam-forming, MATLAB, Python
- Working on understanding non-line of sight imaging capabilities using milli-meter wave radars.
- Developing real time scene and image correction algorithms for Non Line of Sight imaging.

Graduate Services Assistant | Calhoun Lidar Lab, A.S.U. Summer 2021
Technologies: MEMS LiDAR, APDs, Arduino, Python
- Designing and prototyping sub systems for Micro Electro Mechanical System based navigation LIDAR using Single Photon Avalanche Photo Diodes, Pulsed lasers and Time Digital Converters.
- Troubleshooting commercial off the shelf laser range finding systems.
- Managing an inter-disciplinary Engineering Team of 3 at the lab.

Project Associate | Scientific and Industrial Research Centre, G.V.P. Dec 2019 – Dec 2020
Technologies: Python, C, LabView, MATLAB, Eagle, Statistical Inference
- Designed and implemented a trans-impedance amplifier using AD704 in Autodesk Eagle.
- Developed, deployed, signal conditioning, processing algorithms for near real time evaluation of output parameters in Photonic System(s), published technical reports for Commercial Technology Partners.

Academic Projects

2 Axis Scanned LiDAR with Arduino [GitHub] Summer 2021
Built a 2-axis scanned Lidar with real-time 3D visualization support using Arduino, servo motors and GARMIN Lidar Lite.

FM Radio with GNU Radio Companion Summer 2021
Tunable FM Reciever with RTL SDR dongle, with flow graph generated in GNU Radio Companion

Simulation of an RF Cavity Resonator [GitHub] Spring 2021
Designed and simulated a Radio Frequency Resonant Cavity resonator centered at 9GHz, in Ansys HFSS for study of transverse deflection in Linear Particle Accelerators.

PiMon - **Raspberrypi Monitoring Solution** [GitHub] Spring 2021
Device and Network monitoring software with dashboards developed using python, bash, influxDB, Grafana, that can be deployed on a Raspberry Pi within home network.

Py-Ar MQxx [GitHub] Fall 2020
Serial logger in python to extract MQ2, MQ5, MQ9, MQ135 (gas sensors) data connected to an Arduino board, to monitor the presence of atmospheric pollutants.

Academic Achievement(s)

- Awarded with Masters Opportunity for Research in Engineering (ASU MORE) Grant for Fall 2021.