Nitish Nagesh

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EDUCATION

University of California San Diego   San Diego, CA
Graduate student specializing in Embedded Systems; GPA: 4.0   *Sep. 2019 – Jun. 2020*

R.V. College of Engineering   Bangalore, India
Bachelor of Engineering in Electrical and Electronics; GPA: 3.65 (9.12/10.0)   *Aug. 2012 – July. 2016*
- **Awards**: Best Outgoing Student, 2nd Rank for Academic Excellence and 2nd Best Final Project

EXPERIENCE

University of California San Diego   San Diego, CA
Graduate Student Researcher   *Oct. 2019 – Present*
- Working in the **System Energy Efficiency** lab under professor **Dr. Tajana Simunic Rosing**
- Involved in developing a **simulation tool** based on the ns-3 simulator to allow researchers to explore and optimize trade-offs between energy, performance and **reliability in IoT networks**

General Electric Healthcare   Bangalore, India
Operations Management Leadership Program (OMLP) Intern   *Jun. 2015 – Jul. 2015*
- Conceptualized single piece flow in an assembly line of X-Ray devices **increasing productivity by 60%**
- Created a data monitoring template for **reducing equipment down time** and improving productivity

PROJECTS

Design and Implementation of FIR Filter and CORDIC   San Diego, CA
Course Project: Validation and Testing of Embedded Systems   *Jan. 2020 – Present*
- Designing FIR Filters and CORDIC on Vivado HLS and implementing on **PYNQ-Z2 board**

Evaluation of IoT network reliability using ns-3 simulator   San Diego, CA
System Energy Efficiency Lab at University of California San Diego   *Sep. 2019 – Oct. 2019*
- Created a test bed of **10 edge devices** containing NodeMCUs and Raspberry Pis
- Configured devices using **MQTT** protocol and **mesh** topology to their monitor temperature and power
- Network **reliability computed result matched the simulated reliability model** while running different workloads.

Soil pH sensing and fertilizer recommendation system   San Diego, CA
Course Project: Platforms to Bridge the Digital and Physical World   *Jan. 2020 – Present*
- Developing a **real-time remote monitoring tool** for measuring soil-pH levels
- Analyzing data and training machine learning models to suggest a precise **nutrient dispensing system**

Food waste estimation using Received Signal Strength Indicator   San Diego, CA
Course Project: Special Topics in Embedded Computing and Communication   *Sep. 2019 – Dec. 2019*
- Developed a non-contact **RF attenuation** based setup to estimate amount of food waste in a trash bin
- Successfully predicted a heterogeneous mix of grocery waste with **70% accuracy**

SKILLS

Programming Languages: C, C++, Python, MATLAB
Hardware: Arduino, Raspberry Pi, NodeMCU, PYNQ-Z2
Software Tools: Simulink, Vivado HLS, Vivado, LabVIEW, Solid Edge
Operating Systems: Windows 7/8/10, Linux

PUBLICATIONS

- **Submitted for review**: Kazim Ergun, Xiaofan Yu, **Nitish Nagesh**, Ludmila Cherkasova, Pietro Mercati, Raid Ayoub, Tajana Rosing *RelIoT*: Reliability Simulator for IoT Networks
- **Bachelor Thesis**: K Uma Rao, Akash Parvatikar, Gokul S, **Nitish N**, Pramod Rao, **"A Novel Fault Diagnostic Strategy for PV Micro Grid to Achieve Reliability Centered Maintenance"**, First International Conference on Power Electronics, Intelligent Control and Energy Systems, Delhi Technological University, Jul 2016.