

Nitish Nagesh

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OBJECTIVE

Master's student specializing in Embedded Systems & graduating in Sep. 2020 seeking full-time roles in USA

EDUCATION

University of California, San Diego

MS exchange student, Dept. Computer Science and Engineering; GPA: 3.73/4.0

San Diego, CA

Sep. 2019 – Jun. 2020

Technical University of Munich

MS in Power Engineering, Dept. Electrical and Computer Engineering; GPA: 3.1/4.0

Munich, Germany

Oct. 2018 – Sep. 2020

- **Awards:** Scholarship for International Students, TUM:Young Academy Scholar

R.V. College of Engineering

Bachelor's in Electrical and Electronics Engineering; GPA: 3.65/4.0

Bengaluru, India

Aug. 2012 – July. 2016

- **Awards:** Best Outgoing Student, 2nd Rank for Academic Excellence and 2nd Best Final Project

RESEARCH AND PROFESSIONAL EXPERIENCE

University of California San Diego

Graduate Student Researcher, System Energy Efficiency Lab

San Diego, CA

Sep. 2019 – Present

- Created a test bed of 10 edge devices containing NodeMCUs and Raspberry Pis
- Configured devices using MQTT protocol and mesh topology to monitor their temperature and power
- Adding layers over ns-3 simulator to optimize performance and reliability in IoT networks

General Electric Healthcare

Operations Management Leadership Program (OMLP) Intern

Bengaluru, India

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

SAAGE: Sensing and Actuation in Agriculture and Gardening Environments

Course Project: Introduction to Embedded Computing

San Diego, CA

Jan. 2020 – Mar. 2020

- Developed a novel integrated platform to monitor soil conditions and actuated a pest deterrence system
- Used linear regression models to predict sensor readings thus improving crop yield

Real-time environment and soil pH monitoring

Course Project: Platforms to Bridge the Digital and Physical World

San Diego, CA

Jan. 2020 – Mar. 2020

- Developed a remote monitoring tool to infer relationship between soil pH, soil conditions and ambient environment unlike traditional stand-alone systems

Design Space Exploration for FPGA using High Level Synthesis (HLS)

Course Project: Validation and Testing of Embedded Systems

San Diego, CA

Jan. 2020 – Mar. 2020

- Designed FIR filter, CORDIC, DFT, FFT using Vivado HLS and implemented on the PYNQ-Z2 FPGA
- Implemented a canonized Huffman encoding benchmark for the Spector HLS project
- Created different knobs in Vivado HLS and Catapult HLS thereby analyzing performance metrics

Food waste estimation using Received Signal Strength Indicator

Course Project: Special Topics in Embedded Computing and Communication

San Diego, CA

Sep. 2019 – Dec. 2019

- Successfully predicted weight of a heterogeneous mix of grocery waste with 70% accuracy

SKILLS

Programming Languages: C, Embedded C, C++, Python, MATLAB

Hardware: Oscilloscope, Logic Analyzers, Arduino, Raspberry Pi, NodeMCU, PYNQ-Z2

Software and Tools: Simulink, Vivado HLS, Vivado, Catapult HLS, Git, Linux, I2C, SPI, UART

PUBLICATIONS

- **In Progress:** Kazim Ergun, Xiaofan Yu, **Nitish Nagesh**, Ludmila Cherkasova, Pietro Mercati, Raid Ayoub, Tajana Rosing, **RelIoT: Reliability Simulator for IoT Networks**
- **Published:** 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.