SANKET AGARWAL

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EDUCATION

Texas A&M University, College Station, Texas — May 2021
Master of Science in Computer Engineering, GPA: *4.0/4.0*
Mumbai University, Mumbai, India — May 2017
Bachelor of Engineering in Electronics & Telecommunication, GPA: 3.5/4

SKILLS

Programming & HDL: C, C++, Python, Assembly Language, Bash, System Verilog, UVM
Protocols: I2C, SPI, PCIe, TCP/IP, UDP, 802.11, 6LoWPAN
Design/Dev tools: FreeRTOS, GEM5, Keil, Git, Wireshark, Xilinx, CubeSuite+, MATLAB, Raspberry Pi
Debugging: GDB, Oscilloscope, Logic Analyzer, Multisim, JTAG
Relevant Coursework: Operating Systems, Design & Analysis of Algorithms, Advance Verification of Digital Systems, Advance Computer Architecture, Microprocessor System Design, Artificial Neural Networks, Internet Protocols

RELEVANT EXPERIENCE

Intel Corporation, Oregon, USA — August 2020 – Present
Pathfinding Firmware Graduate Intern

- Working on Host Controlled Garbage Collection (HCGC) feature to improve 99.999%ile read speed thereby leading to smoother read service of data centers

Aruba Networks, California, USA — May 2020 – August 2020
Embedded Software Developer Intern | Best in Class

- Developed the infrastructure to classify 3500+ logs into different severity levels, enabling quicker resolution of customer defects thereby reducing response time by 50%
- Triaged all coverity defects in Power, Button, LEDs, and Thermal modules of the Aruba 8400 switches in 2 weeks

Larsen & Toubro, Mysore, India — July 2017 – July 2019
Senior Firmware Engineer

- Pioneered immunity of direct current saturation using C programming to reduce cost of 300,000 monthly produced DC Immune meter by $20
- Integrated 6LoWPAN communication module, developed its application layer using C++ programming, allowing wireless collection of data in electricity meters to boost data collection time by 60%
- Expedited testing duration of all energy meters by developing Display Tester Software (DTS) in Python and C#, thereby improving validation time by 15%
- Restructured battery mode firmware and its operation algorithm, reducing battery power consumption by 90% leading to increased battery life by 39 months

PROJECTS

Electronic Vision Assistance (EVA) system: — June 2016 – Present

- Developed EVA's firmware in Python using Raspberry Pi and OpenCV libraries to detect obstacles, recognize the face and give audio output to a blind person
- Published Design (308566), Idea (308565) & Product (201821041037) patents of EVA System with Indian Patent Office

Super Scalar Processor simulator and IPC predictor: — August 2019 – December 2019

- Analyzed the effect of different design tradeoffs like functional units, dispatch buffer, Instruction window & ROB buffer sizes on a superscalar processor using GEM5 and developed a IPC predictor allowing faster simulation of models

Artificial Neural Network based Smart Jar: — May 2018 – July 2018

- Created a 3-layer neural network along with training, testing and validation data sets in MATLAB that automatically selects groceries based on buying patterns, thereby saving personal time

LEADERSHIP

Indian Society for Technical Education (ISTE), Mumbai, India — September 2014 – May 2017
Chairperson & Senior Treasurer | Treasurer | Coordinator

- Led a team of 60 members and represented ISTE to various Multinational Corporations, raising funds above $12,000 every year for the annual festival