Sujith Naapa Ramesh

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Expected Dec 2020**
Bachelor of Science, Electrical Computer Engineering and Computer Science
GPA: 3.627
Awards: Dean's List (Fall 2017, Spring 2018, Fall 2018, Spring 2019), Cornell Tradition Fellow

Littleton High School, Littleton, MA **June 2017**
GPA: 4.91, Salutatorian
Awards: National Merit Scholarship Semifinalist, Rensselaer Medal

Relevant Courses: Designing with Microcontrollers, Computer Architecture, Operating Systems, Intro to Microelectronics, Embedded Systems, Intelligent Physical System, Digital Logic and Computer Organization, Introduction to Circuits, Signals and Information, Honors Objected-Oriented Programming and Data Structures, Advanced Java Programming, UNIX Tools and Scripting, Discrete Structures, Probability and Inference

RELEVANT EXPERIENCE

Gerber Technology, Tolland, CT, *Software Controls Intern* **June-Aug. 2019**
- Coordinated with a team of electrical and firmware engineers to design software controls for CNC machines
- Implemented an EtherCAT network between a Beckhoff PLC and existing hardware on the head of a CNC cutter
- Built diagnostics software for the head of a CNC cutter using Structured Text
- Sourced an uninterruptible power supply for the electrical box of a new CNC cutter
- Prototyped a new electronics system for a CNC spreader that relies on an EtherCAT network to control the machine
  - Rewired the old electronics box to incorporate a Beckhoff PLC that serves as the master for the EtherCAT network

Baja SAE Racing Team, Cornell University, Ithaca, NY, *Electronics Subteam Member* **Sep. 2017-Present**
- Designed Spark Plug Sensor using an Asymmetrical Inverting Schmitt Trigger and software debouncing to collect engine RPM data
- Populated and debugged strain amplification PCBs to examine torque on driveshaft
- Built a simplified data acquisition system by interfacing a Raspberry Pi and off the shelf DAQ device
- Designed an SD card logger that uses an STM32 microcontroller to log data to a Micro SD Card over SPI bus
  - Used Altium Designer to create the PCB design and wrote and debugged the firmware using an STM32 Discovery Board
- Collaborate with a team of six peers to integrate different testing equipment for competitive off-road racing vehicle

Digital Logic and Computer Organization Class, Cornell University, Ithaca, NY, *Teaching Assistant* **Aug.-Dec. 2018**
- Moderate lab and assist with Verilog design projects on Altera FPGA boards for a class of 40 students
- Hold office hours once a week and grade student assignments

PlumChoice Inc., Lowell, MA, *Software Engineering Intern* **June-Aug. 2017, Jan. 2018, and June-Aug. 2018**
- Created pagination using jQuery DataTables and rewrote SQL queries for AT&T's BOOST sales platform
- Wrote bash and WebLogic Jython scripts on a Linux platform to create an automated deployment system

Cornell Make-A-Thon Finalist, Twitch Does Art **Feb. 2018**
- Created a server that polled user input through HTTP requests and interfaced with an ESP8266 WiFi Module
- Designed a robot that was controlled by the ESP8266 and received commands from the server

CNC Machine, Personal Project **Jan.-May 2017**
- Built CNC mill using parts that were 3D printed and laser cut in LHS Makerspace
- Controlled CNC machine by interfacing with an Arduino which was rooted to run Grbl

SPECIALIZED SKILLS

Digital Design: PLC, FPGA, ARM ISA, MIPS ISA, STM32, Arduino, Hardware Architecture/Organization
Technologies: TwinCAT3, Altium Designer, Git, Subversion, STM32CubeMX, Solidworks
Software/OS: C, Structured Text, Python, Verilog, Java, Bash, MATLAB, SQL, XML, Linux, Windows
Equipment: Oscilloscope, Logic Analyzer, Soldering, 3D Printing, Laser Cutting