Girish Narayanswamy

Electrical and Computer Engineering || Embedded Systems Design || Software Development
girish.narayanswamy@colorado.edu || 720-938-0208 (mobile) || linkedin.com/in/gnarayanswamy

Education

University of Colorado Boulder — Aug. 2014 – Present
MS Embedded Systems Engineering (Expected May 2019) — *Current GPA: 3.86*
BS Electrical and Computer Engineering (May 2018)
Minor Computer Science (May 2018)

Fairview High School — Aug. 2011 – May 2014
International Baccalaureate (IB) Recipient — *Unweighted GPA: 3.91*

Work Experience

- **Qualcomm Technologies** — June 2018 – Sept. 2018
  R&D Software Intern
  - **WiFi Modem Team**: 11.ax Wifi
- **CU Computer Science: Correll Lab** — Aug. 2016 – Aug. 2017
  Undergraduate Research Assistant
  - **Robotics and Smart Prosthetic**: Helped research and design smart prosthetic claw
- **CU Electrical Engineering: Applications of Embedded Systems** — Aug. 2016 – Dec. 2016
  Teaching Assistant
  - **Responsibilities**: Developed lab material, held office hours, graded homework, lab reports, and tests
- **Medtronic** — May 2016 – Aug. 2016
  R&D Software Intern
  - **Responsibilities**: Created audio feedback drivers, conducted unit testing, and fixed bugs for Ultrasonic Tissue Dissector
  - **Software Development**: Developed in embedded C/C++ on TI Piccolo microcontroller

Projects

- **Configurable Gaming Controller (Senior Design Project)**: Controller with touchscreen, buttons, joystick, Bluetooth, and IMU integration. PCB design, firmware development, RTOS integration, application development
- **Remote Controlled Robot**: TI MSP432 (Cortex-M4), implemented joystick and button functionalities, interfaced wirelessly with robot
- **Smart Backpack**: NXP LPC1114 (Cortex-M0), backpack designed to detect items with weight sensing and "smart" stretch pockets, interfaced with Android application via Bluetooth
- **Smart Lock**: NXP LPC1114 (Cortex-M0), door lock interfaced with Android application, via Bluetooth, to remotely lock/unlock
- **Application Prototyping**: Developed simple web applications (HTML, CSS, MySQL, JS), and Android applications (Android Studio, Java, XML)

Relevant Classes and Experience

- **Programming Skills**: C (expert knowledge), C++ (expert knowledge), MATLAB (expert knowledge), Java (working knowledge), Python (working knowledge), Unix (working knowledge), ARM Microcontrollers, UART, I2C, Linux
- **Electrical Engineering Skills**: PCB Design, Hardware Debugging, Oscilloscope, Function Generator, SMT Soldering
- **Programming Courses**: C Programming, Applications of Embedded Systems, Data Structures, Algorithms, Computer Organization, Operating Systems, Principles of Embedded Systems
- **Electrical Engineering Courses**: Circuits as Systems, Digital Logic, Linear Systems, Digital Signal Processing, PCB Design
- **Mathematics Courses**: Calculus I/II/III, Differential Equations and Linear Algebra, Discrete Math, Probability

Honors and Extracurricular Activities

- **Engineering Honors Program**: Selective residence program based of applicant's academics and extracurricular activities
- **UROP Individual Grant**: Won grant to research and develop smart prosthetic
- **University of Colorado Mamabird**: One of the nation's top 10 collegiate Ultimate Frisbee teams
- **Shotokan Karate**: Shodan (first degree black belt), Senpai (instructor's assistant) at International Martial Arts Association
- **Scholarships**: Intel Merit Scholarship, BOLD Scholarship, Engineering Differential Scholarship, Sewall Esteemed Scholarship