Daniel Schmidt

Objective: To become as skilled in the design of control systems and robots as I possibly can

Education:

California State University, Sacramento: 2012 to Fall 2014
  Grade Point Average: 3.85
  Degrees in Progress:
- o B.S. Electrical Engineering – Controls

Sacramento City College: 2007 to 2012
  Grade Point Average: 3.84
  Degrees Completed:
- o A.S. Electronic Facilities Maintenance Technician , Telecommunications Technician, Mathematics

Programs and Courses Studied:

- o PC Assembly and Repair
- o Operating Systems Experience (Windows, Linux, iOS)
- o Soldering and high-tech assembly
- o AC/DC, Semiconductor theory and analysis
- o Receivers and transmitters
- o Mathematics, General Chemistry, Physics
- o Network analysis
- o Logic design, HDL - Verilog
- o Transistor amplifier design
- o Analog/Digital control system design
- o Machine Vision
- o Microprocessors
  - ▪ Intel x86
  - ▪ ARM – Raspberry Pi
- o Microcontroller programming
  - ▪ Atmel ATmega328
  - ▪ Parallax Propeller
- o Robotics

Experience:

- Programming Languages: C/C++, Python, Perl, batch, shell, Intel Assembly, Verilog
- Web Design: HTML, CSS, Javascript, jQuery
- Test Equipment: DMM, Oscilloscope, AWG, Protocol Analyzer
- Software: Pspice, Multisim, ADS, Matlab, MS Office Suite, Apache Open Office, Quartus II

Projects:

- Senior Design:
  - o Home infant monitor with hot-swappable, self-identifying sensors and Web-based interface
    - ▪ Designed hot-swappable 'smart sensor' modules which identify themselves as well as check sensor data for threshold levels indicative of a medical emergency and alert main hub
    - ▪ Designed interface between sensors and main hub using Inter-integrated Circuit (I^2C) Bus
    - ▪ Constructed all hardware components; Designed template for chassis fabrication
    - ▪ Performed device and sensor hardware testing; DMM, Oscilloscope, writing and evaluating test code
    - ▪ Participated in Idea-to-Product competition for Biomedical design projects
- Robotics:
  - o Laser-guided PID-controlled mobile robot
    - ▪ Wrote code for Proportional-Integral-Derivative control of robot's position
    - ▪ Tested robot to determine optimal value for PID tuning parameters
    - ▪ DC motors, IC H-Bridge, Arduino for robot control and Raspberry Pi for image processing
  - o Autonomous mobile robot with Infrared and Ultrasonic obstacle detection
    - ▪ ATmega328 – Arduino on a breadboard
    - ▪ Proportional Control of DC motors – using proximity feedback from sensors
  - o Autonomous mobile robot with Infrared obstacle and edge detection
    - ▪ Parallax Propeller with C/C++
    - ▪ Continuous rotation servos
  - o PID speed controller for DC motor using I^2C interface (Sensor to Controller)

Professional Experience:

- Micron Technology, Inc.
  - o Developed software to control a cross-temperature test flow for SSDs in a Linux environment
    - ▪ Object-oriented, compiled using g++ and Linux "make" utility
    - ▪ GPIB interface to control temperature and power
  - o Developed software to automate a power cycling control system with verification scripts to test functionality of multiple SSDs
    - ▪ Controlling PCs across a network using PsExec