

Resume - Matthew Stephen Smith

Email: matthewsmith6626@gmail.com

EDUCATION

UNIVERSITY OF QUEENSLAND St Lucia, QLD
Bachelor of Engineering (Electrical Engineering Extended Major) (*Ongoing*)

2015-Present

SKILLS

Programming Languages: C, C#, Matlab, Python, HTML, JavaScript
Operating Systems: Windows, MacOS, Linux, FreeRTOS
Software: Altium Designer, Kicad, Matlab, Simulink, LTSpice
Embedded Systems: Arduino, Atmel, Espressif, STMicroelectronics, FPGA

PROJECTS

Linear bench power supply

- 0-20 V, 0-3 A adjustable output power supply
- Simulated and prototyped on breadboard

Electronic DC load

- 0-30 V, 0-3 A adjustable electronic load
- Simulated in LTSpice and schematics and PCB designed in Kicad
- Input protection considerations for overvoltage and reverse polarity scenarios
- Thermal simulations and solution using CPU heatsink and fan
- Firmware for digital control and monitoring

Internet of things (IoT) portable monitoring device (Team)

- Data logging project for recording temperature, humidity, and ultraviolet index
- Location monitoring via GPS module
- ESP32 microcontroller to interface with sensors and send data securely over WiFi
- Software interfaces to display recorded data and interpret securely transmitted data

Analysis of digital control systems for grid-connected solar inverters

- Final-year thesis project examining optimal digital control methods for solar inverters
- Aims to extend standard inverter control methods to consider grid-impedance variation for more stable control in wider range of operating conditions

Electrocardiogram hardware frontend with QRS wave detection

- Constructed a high gain differential amplifier with analog filtering stages for displaying a person's heartbeat
- Considered safety when designing electronics involved in measuring the body
- Digital signal processing implemented to detect the occurrence of the QRS wave (tested in MATLAB and ported to a Teensy 2 microcontroller)

WORK EXPERIENCE

UNIVERSITY OF QUEENSLAND St Lucia, QLD
Second Year Electrical Engineering Tutor

February 2018
- June 2018

- Tutoring for ELEC2003 *Electromechanics & Electronics*
- Assisting students in practical classes and tutorial classes

**KMART Upper Mount Gravatt, Queensland
Customer Service (Point of Sales Systems)**

2014 - Present

- Customer service role (point of sale systems)
- Working in teams to accomplish tasks effectively and efficiently
- Interacting with customers to provide a positive shopping experience
- Managing co-workers to complete more involved tasks
- Sorting out technical issues smoothly and quickly
- Adapting to unfamiliar roles as required

REFEREES

Courtney Friend
Organisation: Kmart
Referee Position: Customer Service Manager
Phone: (07) 3360 9400