Matthew Dias

416-476-3427 | mddias@uwaterloo.ca

EDUCATION

UNIVERSITY OF WATERLOO
Honours B.Sc in Electrical Engineering
Computer Engineering Option
Expected April 2019 | Wateroo, ON
Cum. GPA: 3.5

YORK UNIVERSITY
B.Sc in Health Science
June 2014 | Toronto, ON
Dean's List (All Semesters)
Cum. GPA: 3.8

COURSEWORK

Algorithms and Data Structures
Analog Control Systems
Electronic Circuits
Semiconductor Devices
Embedded System Design

PROGRAMMING SKILLS

Proficient:
• C • C++ • VHDL • Python
• Java • BASH • TCL • MATLAB
Familiar:
• Assembly • PostgreSQL • Swift
• LaTeX

TOOLS

Software Development
• Vim • Visual Studio • Eclipse • Keil
• Android Studio • X-Code • Altera Quartus

Design
• AutoCAD • Diptrace • Altium
• Multisim

Source Control
• Git • SVN

Operating Systems
• Linux • Windows • OS X • Android

Lab Equipment
• Oscilloscopes • Function generators
• Digital multimeters • Vector network analyzers (VNA)

EXPERIENCE

EVERTZ MICROSYSTEMS | Embedded Systems Developer
May 2017 - Aug 2017 | Markham, ON

- Used OpenOCD to develop an application to store files in CPLD flash memory
- Created a FUSE virtual file system for Linux using C to act as an interface for the storage application
- VHDL based FPGA development, on-chip debugging and firmware configuration to allow for the transition from an Intel to XPliant ethernet switch

EATON | Engineering Intern
Sept 2016 - December 2016 | Mississauga, ON

- Developed VBA scripts to collect project management metrics from Basecamp
- Developed a library of commands for AutoCAD using LISP to automate the process of preparing drawing exchange files for database import
- Managed lighting databases using PostgreSQL queries

SMITH + ANDERSEN | Junior Electrical Designer
Jan 2016 - May 2016 | Toronto, ON

- Drafted AutoCAD drawings of power distribution and lighting systems, calculated electrical loads and sourced equipment for large infrastructure projects

EXTRACURRICULAR

UWATERLOO ROBOTICS TEAM | Circuit Design
Jan 2017 - Present

- Designed the schematics and PCB layout of various boards for the Mars rover
- Design, LTSpice simulation and testing of voltage regulators and a power supply selector system for the battery management board

WEARABLE/HEATHCARE DEVICES LAB | Research Assistant
Sept 2017 - Present

- Currently developing a concussion diagnostic tool on Android by using OpenCV to detect a user's hands and track disparities in their motion during a simple motor test

PROJECTS

TEAMLINES | Java, Python
https://git.io/vdUZC

- Developed an Android app to display up-to-date Twitter timelines of professional sport teams
- Created python scripts to scrape sport team rosters and player information from Wikipedia and Twitter

RETRO GAMES | C
https://git.io/vdUZE

- Designed games similar to Space Invaders and Flappy Bird for the TI Tiva-C microcontroller
- Wrote firmware for timers, interrupts, an ADC, a 4-bit DAC and to interface with various GPIO such as LEDs and an LCD