

Mitchell Overdick

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EDUCATION

WESTERN WASHINGTON UNIVERSITY

BS IN ELECTRONICS ENGINEERING
MINOR IN MATHEMATICS
2017 | Bellingham, WA
Cum. GPA: 3.48

COURSEWORK

UNDERGRADUATE

Digital Circuit Design
Analog Circuit Design
Embedded Systems (C/Assembly/RTOS)
Printed Circuit Boards (Altium)
Digital Signal Processing (Matlab/CMSIS)
Communication Systems
(*Research Assistant*)
Unix Tools and Scripting
C++
SDR Programming
High-Speed DSP

SKILLS

PROGRAMMING

Over 5000 lines

C • Python • MATLAB

Over 1000 lines

C++ • C# • Java • JavaScript • JavaCard
• \LaTeX • Assembly • CSS • XAML

Familiar

MySQL • PHP • R • Bash • Batch

SOFTWARE

Well Versed

Altium • Gimp • Microsoft Office • Excel
• OnShape • Eclipse • Git

Proficient

LabVIEW • LogiCAD • Visual Studio
• PyCharm • SVN • dSPACE • CANalyzer

GENERAL

3D Printing • Soldering • Wiring Harness
• Organization • Diagnostics • Time
Management • Mechanic • Graphic Arts
• Recording Engineering • Schematic
Capture

SOCIETIES

2016 International IEEE HKN
2013 National NSCS

EXPERIENCE

TYFONE | SYSTEMS AND APPLICATIONS ENGINEER

Sep 2018 – Present | Portland, OR

- Schematic capture and flexible PCB layout for BLE enabled smart card (Altium)
- Developed proofs of concept for potential products (Python, C#, JavaScript)
- Developed and maintained Altium component database (SVN, SQL)
- Developed firmware for BLE enabled smart card (PSoC, C, Git)

PACCAR TECHNICAL CENTER | EMBEDDED SYSTEMS VALIDATION ENGINEER

Jun 2017 – Aug 2018 | Mount Vernon, WA

- One of the original developers of test automation platform (C#, XAML)
- Serviced and maintained HIL benches
- Developed test procedures for embedded vehicle software

WESTERN WASHINGTON UNIVERSITY | RESEARCH ASSISTANT

Jul 2015 – Jun 2017 | Bellingham, WA

- Developed high speed DSP software for embedded SDR (Linux, C++, Git)
- Performed statistical analysis of data for calibration (MATLAB)
- Co-authored two IEEE publications presented at **ICASSP** and **AeroConf**

PUBLICATIONS

- | | | |
|------|---------------|---|
| 2018 | IEEE Oceans | "A Small Energy Harvesting Autonomous Surface Vehicle" |
| 2018 | IEEE AeroConf | "Implementation and testing of a low-overhead network synchronization protocol" |
| 2017 | IEEE ICASSP | "A software-defined radio implementation of timestamp-free network synchronization" |

PROJECTS

MACHINE LEARNING | CERAMIC TRADEMARK IDENTIFICATION CNN

Oct 2017 – Apr 2018

- Worked alongside WWU Anthropology Department student
- Developed basic method for training neural network on limited training set
- Created 6000 image data set from 24 images using MATLAB
- Trained TensorFlow CNN which has achieved a preliminary accuracy of 80%
- Presented work in poster session at NWAC 2018 in Boise, ID

AUTOMATION | HIL/SIL AUTOMATION INTEGRATED PLATFORM

Jan 2018 – Sep 2018

- Helped develop fully integrated graphical test automation application
- Defined initial architecture and use cases
- Lead GUI designer, written in XAML and C#

AUTONOMOUS BOAT | WWU SENIOR PROJECT

Sep 2016 - Jun 2017

- Designed chassis using 3D printed material (OnShape)
- Co-designed embedded system (SPI, I2C, UART, GPS)
- Co-designed and authored firmware (C, RTOS)
- GPS, bluetooth, flash, accelerometer, magnetometer, motor driver, solar
- Co-authored IEEE publication presented at IEEE OCEANS conference