

Alex Fuhr

600 Rainbow Drive Apt 176 • Mountain View, CA 94041 • (513) 405-7617 • fuhr.8@osu.edu
Github: afuhrtrumpet • LinkedIn: <http://www.linkedin.com/in/alexfuhr>

Objective

An impactful, fast-paced position with creative freedom in the field of audio, video games, or embedded systems, or a part time or contract software engineering position.

Experience

Google – Software Engineer (Mountain View, CA) 6/17 to present

Working on improving analysis of Street View images.

Google – Software Engineering Intern (Mountain View, CA) 5/16 to 8/16

Worked on features to improve a machine learning algorithm for analyzing part health data.

ElectroScience Lab – Undergraduate Researcher (Columbus, OH) 1/15 to 5/15, 1/16 to 5/16

Tested and planned an RF tracking system using a Zigbee mesh network.

Raytheon SI – Computer Science Engineering Intern (Indianapolis, FL) 8/15 to 12/15

Researched potential exploits in several native and browser-based applications and worked on internal tools for exploit analysis.

Google – Software Engineering Intern (Mountain View, CA) 5/15 to 8/15

Created, debugged, and tested several new features to Google's iOS mobile ads SDK.

BloomReach – Engineering Intern (Mountain View, CA) 5/14 to 8/14

Created a web application using Java, Play Framework, AngularJS, and MySQL to simplify the retrieval and optimization of data extraction.

Education

The School of Video Game Audio March-April 2018

Learning how to use Wwise and record sounds to make a video game audio demo reel.

The Ohio State University Graduated May 2017

3.85 GPA, B.S. Electrical and Computer Engineering

Projects

- **Digital Synthesizing Guitar:** A 72-note guitar operated with touch sensors that included several different filters created with a DSP board to change the sound.
- **WiFinder:** A robot that utilized two ESP8266 modules to drive towards the location of the best Wi-Fi signal for a given hotspot.
- **Laser Harp Hero:** A laser harp capable of playing multiple keys and types of scales and includes a Guitar Hero-style game.
- **Meteor Flies Drone:** A web application written in Meteor that allows many users to control a drone using two different control styles. Won Most Entertaining at Meteor hackathon.

Technical Skills

- C#, Java, Python, C, C++, Objective-C, and CLISP syntax, data structures, common libraries, and version control
- Electrical circuit prototyping, schematic and PCB design with EAGLE and KiCAD
- Electronic communication protocols such as UART, I2C, and SPI, and components such as 555 timers and shift registers
- FPGA design using Verilog and VHDL with Quartus II and Xilinx ISE Tools
- Front-end web development with HTML, CSS, Javascript, JQuery, AngularJS, and Polymer
- Microcontroller-based electronics using AVR and MSP430
- Security concepts such as buffer/heap overflows, fuzzing, and code injection
- x86, MSP430 and ARM assembly languages and architectures, and CPU design using HDL
- Machine learning concepts and model design with Tensorflow
- Audio generation using DAWs and Pure Data, music theory concepts

Activities

- **Volunteering:** Dog TLC volunteer at Pets In Need in Redwood City, October 2017-present
- **Engineering:** Open Source Club (vice president), Collegiate Web Developers Group (vice president), IEEE, Electronics Club (social chair)
- **Music:** OSU Jazz Ensemble, Jazz, Fusion Combo

Relevant Coursework

- OSU: Computer Architecture, Computer Networking, Mixed-Signal VLSI, Network Security, RF & Optics, Advanced

Digital Design, Operating Systems

- Online: Survey of Music Technology (Coursera), Music Theory for Electronic Music 1, 2, and 3 (Udemy), Game Music Composition (Udemy)