

# Alex Fuhr

6309 Heatherhill Drive • West Chester, OH 45069 • (513) 405-7617 • fuhr.8@osu.edu  
http://alexfuhr.me • Github: afuhrtrumpet • Linkedin: http://www.linkedin.com/in/alexfuhr

---

## Objective

An challenging, team-based internship, co-op, or part time position working on the software or electronics of embedded systems during the school year or summer.

## Experience

**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.

**all R friends – Software Developer Intern** (Columbus, OH) 8/14 to Present  
Working on various aspects of the company's backend system, including an automated text-messaging system and wiki.

**OSU ElectroScience Laboratory – Undergraduate Researcher** (Columbus, OH) 1/15 to Present  
Building a precise RF tracking system using a Zigbee mesh network driven by Arduino.

**The Ohio State University – Undergraduate Researcher** (Columbus, OH) 11/14 to Present  
Currently building a 3-axis prototyping machine with 3D printing and laser cutting capabilities, as a group of four supervised by Dr. Arnab Nandi and funded by the university's Research Scholar Awards.

**Wexner Medical Center — Software Developer** (Columbus, OH) 1/14 to 4/14, 9/14 to 12/14  
Volunteer position: Wrote Java-based plugins for ImageJ to optimize image processing. Currently creating an image viewer GUI with Python and GTK2.

## Education

**The Ohio State University** Expected Graduation: May 2017  
4.0 GPA, B.S. Electrical and Computer Engineering

## Projects (more information and source on Github)

- **FEH Proteus Robot:** Designed, programmed, tested, and documented a fully autonomous robot designed to perform a series of tasks in a fictional candy factory. The robot won in the competition's elimination round.
- **Project Zen:** Created for the 2014 OSU hackathon, a set of robotic arms that can rake a zen garden controlled by a Leap Motion and visible through a web interface.
- **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.
- **FPGA Pong:** A pong game done entirely in Verilog that utilized timing, buttons, and VGA signals and ran on an Altera DE0 board.

## Technical Skills

- C#, Java, Python, C, and C++ syntax, data structures, common libraries, and version control using Git
- Electrical circuit prototyping, schematic and PCB design with EAGLE
- Common electrical protocols such as UART, I2C, and VGA, and components such as 555 timers and shift registers
- FPGA design using Verilog and Quartus II block diagrams
- Front-end web development with HTML, CSS, Javascript, JQuery, AngularJS, and Polymer
- Microcontroller-based electronics and ICs with Arduino, Raspberry Pi, and TI Launchpad
- Server-side web development with Django, Meteor, and Node.js
- Android development, common libraries, and Google APIs

## Honors and Activities

- **Engineering:** Open Source Club, Collegiate Web Developers Group (project leader), IEEE, Electronics Club (social chair), Dexterity 43210
- **Music:** OSU Jazz Ensemble, Art Blakey Combo
- **Awards:** First Place Head to Head, OSU Fundamentals of Engineering for Honors robot competition
- **Designations:** OSU Honors Program, AP Scholar with Distinction
- **Scholarships:** Maximus Scholar, Grasser Scholar, Hendrix Scholar, Mu Alpha Theta, Research Scholar Award

## Relevant Coursework

- **Current:** Electrical and Computer Engineering II, Holography, Advanced C Programming, LISP, Microcontrollers
- **Past:** Electrical and Computer Engineering I, Fundamentals of Engineering Honors: Advanced Programming and Robotics, Software I/II, Linear Algebra, Differential Equations