

## Education

*Missouri University of Science and Technology* (Rolla, MO)

August 2009 – May 2013 (4 years)

**B.S. in Computer Science, B.S. in Computer Engineering,** and a Minor in Mathematics

## Experience

*Microsoft Corporation*

Redmond, WA

### **Software Engineer 2**

July 2013 – Present

- Develops and optimizes mobile device testing automation and infrastructure.
- Building and maintaining a physical/virtual device lab for automated checkout.
- Sole owner of testing several product areas, including all testing and validation for an entire box product.
- Intern Social Club Leader (April 2014 – Present)
  - Worked closely with University Recruiting to organize dozens of events for ~30 interns every summer, maximizing their experience with Microsoft and Seattle.
- Drones Garage Chapter Lead (December 2016 – Present)
  - Organized a month-long series of talks, projects, and races for Drone Month March 2017.
  - Presents and conducts interviews for our Channel 9 Show on photography, racing, building, and programming of drones.
  - Designed and demonstrated a new low-cost drone tracking technology to deliver a custom solution to a Drones Garage customer (and later, the community at large).

### **Software Engineer**

- Organized testing with an offsite vendor team to increase testing capacity and throughput.
- Designed, planned, and managed critical migration of massive test case database. (1<sup>st</sup> of its kind)
- Designed and maintained several environment configurations needed to test different customer scenarios.
- Filed several patent applications for new applications and new technologies.
- Head Recruiter for recruiting trips to several Midwest Universities (September 2014 – September 2016)
  - Attending career fairs, sorting resumes, conducting interviews, guest speaking/teaching classes.
  - Working with campus faculty/staff/leadership to improve Microsoft's relationship.
- 2014 Hackathon project recognized and developed into full CRM product feature.
- 2016 Hackathon project (AR) recognized by Senior Leadership and demoed to U.S. DoD.

*Conscious Crew (USC Events)*

Seattle, WA

### **Volunteer First Responder and Stage Lead**

October 2016 - Present

- Harm reduction non-profit which promotes health and safety in the dance music community
- First responder to medical/psychological emergencies at dozens of large, high-risk concerts and festivals.
- As a lead, personally responsible for coordinating the efforts of dozens of volunteers to ensure the safety of 10's of thousands of event attendees.

*Technology Education and Literacy in Schools (TEALS)*

Issaquah, WA

### **Volunteer Teacher**

September 2016 – May 2017 (1 year)

- Teaching high school students AP Computer Science 3 days/week before heading to work
- Developing curriculum (Java), tests, quizzes, homework, labs, grading, projects, etc.
- Conceived, documented, and executed a new post-exam project for TEALS: students created an Android app to control a Drone, plot a mission course, frame a video, and record.
- 95% of students passed exam and received college credit; 50% of students got highest grade possible.

### *National Information Solutions Cooperative (NISC)*

Lake St. Louis, MO

#### **Programming Intern / Part Time Developer**

May 2011 – December 2012 (1.5 years)

- Created a dashboard (using Java/GWT) for electric company customers which predicted future electric load based on research models and previous usage data. Other relevant factors like current and upcoming weather patterns were also included and bubbled up to help electric companies predict and anticipate future electrical grid load.
- The Smart meter data utilized was retrieved from Cassandra cluster and bucketed by Hadoop.
- Worked on internal tooling around cloud clusters, using Ganglia to monitor cluster statistics.
- Mentored several new interns, helping them take their own projects from start to finish.
- Took 3-4 projects from concept to reality; presented final products to company heads.

### *Product Innovation and Engineering, L.L.C.*

Rolla, MO

#### **Undergraduate Research Assistant**

October 2010 – May 2011 (6 months)

- Developed an industry-grade program that analyzes a 3D model, slices it into layers, and then guides (G-code) laser deposition of a powdered metal. The laser is mounted to a 6-axis robotic manufacturing arm repurposed from a car manufacturing assembly line.
- Primary contact with an external consulting group we hired to develop several algorithms.

### *ACM SIG-Game*

Rolla, MO

#### **Competitor / Volunteer Developer**

August 2010 – May 2013 (3 years)

- Worked on the development team to improve limited Java support by improving code generator.
- Revised internal tooling and established new standard development tools for the team.
- Significant improvements to testing infrastructure for the backend and client libraries.

## Interests

- |                                |                                  |                                  |
|--------------------------------|----------------------------------|----------------------------------|
| • Recruiting and Mentoring     | • Maker Community                | • InfoSec, Privacy, Human Rights |
| • Equality/Diversity Promotion | • Puzzles & Coding Challenges    | • Hackathons, micro-projects     |
| • Skiing, Hiking, Soccer       | • Trumpet (Concert, Jazz), Piano | • Planes (earning PPL), Space    |
| • World Travel                 | • Teaching and Learning          | • Hobby RC and Drones            |

## Certifications, Honors, and Activities

- Scholarship Application Reviewer for Grace Hopper Celebration 17 (total 6,700 applications reviewed)
- Life Member of Kappa Kappa Psi, the Honorary Band Service Fraternity
- CPR, AED, and First Aid Certified
- Bellevue Community Band Member, Trumpet
- *Church of the Singularity* Co-founder - GitHub org conceived to satisfy Roko's Basilisk thought experiment
- Stable Tor Relay Host (Guard/Middle) Fingerprint: 1821A0D2FF5B309A4FD3E8FC654773FC0927779F
- Discovered (computed) a new, unique 414,357 digit-long prime number:  $5687 \cdot 2^{1376451} + 1$