justingallagher
computer scientist & software engineer

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languages
★ C
★ C++
★ C#
★ Java
Javascript
Python
SQL
SML

technologies
Android SDK
Windows SDK
Node.js
ASP.NET
OpenGL

applications
Git
LaTeX
Vim
Microsoft Office
Visual Studio
Linux
Windows

interests
Firmware development
Robotics
Operating Systems
Game Design

technical experience

since 2016 — **Microsoft Corporation,** Software Engineer — Redmond, WA
- Worked with product designers and program managers to improve Microsoft Edge's downloads interface.
- Quickly ramped up with a large codebase to deliver new features and fixes.

2015 — **Microsoft Corporation,** Software Engineer Intern — Redmond, WA
- Designed and implemented an analytics tool which allows hierarchical search of XAML file structure using C# and SQL.
- Leveraged telemetry data to actively track the reliability of Windows Phone applications, leading to the discovery of a ship-blocking bug.

2013–2015 — **CMU Biorobotics Lab,** Researcher for Dr. Howie Choset — Pittsburgh, PA
- Led a team of 3 students in planning and implementing firmware for JumpingBot, a robot which can self-stabilize in freefall.
- Designed and programmed an Android application which allows realtime sensor data to be accessed in MATLAB and ROS.

education

2013–2016 — **Carnegie Mellon University** — Pittsburgh, PA
Bachelor of Science, Computer Science & Business Administration Minor
GPA: 3.63/4.00   **Dean's List**: Fall 2013, Fall 2014, Spring 2015

selected projects

2016 — **fpga-trace,** 15-418 Parallel Computer Arch. & Programming — Pittsburgh, PA
- Implemented a ray-tracing renderer using an FPGA to perform highly parallel triangle-ray intersection tests.
- My method yielded a nearly 2x performance improvement and increased power efficiency versus a SIMD enabled CPU implementation.

2015–2016 — **course-api,** Scottylabs — Pittsburgh, PA
- Developed a set of Python scripts that provide developers access to CMU course schedules, descriptions, and student evaluations.

2013 — **CMUEats,** HackCMU — Pittsburgh, PA
- Wrote the backend for a web application that tracks the hours of CMU dining locations using Python, Django, and MongoDB – later ported to Node.js.
- A year later, the app maintained more than 400 daily hits from students.

other experience

2014–2016 — **Scottylabs** — Pittsburgh, PA
- Helped to organize and operate Tartanhacks, a hackathon of 350 students from the Pittsburgh area.

2013 — **Eagle Scout,** Boy Scouts of America — Amherst, NH
- Brainstormed, planned, and executed a service project that supplies used eyeglasses to developing countries. Over the course of the project, I raised more than $650 and managed 38 volunteers.