# justingallagher

computer scientist & software engineer

#### contact

(603) 440-3873 me@justingallag.com justingallag.com github: justingallagher linkedin: justingallag

## 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.