

ZACHARY SUSSMAN

✉ zussman@andrew.cmu.edu

🌐 zacharysussman.com

☎ (561) 716-0881

📍 1091 Morewood Ave
Pittsburgh, PA 15213

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Enthusiastic CS major with experience in both team and individual work settings.

PROGRAMMING LANGUAGES

Python

Javascript

C

Objective-C

Hack/PHP

HTML5/CSS

Java

Standard ML

Haskell

C++

FRAMEWORKS

React.js

Flow

GraphQL

UIKit

Leaflet.js

SOFTWARE

LaTeX

Git and Github

Mercurial

KEY COURSES

Introduction to Computer Systems

Parallel and Sequential Data Structures and Algorithms

Foundations of Programming Languages

Probability and Computing

Human-Robot Interaction

Teaching Assistant, Mathematical Foundations for Computer Science

Great Theoretical Ideas in Computer Science

Functional Programming

Mathematical Studies Algebra I and II

Vector Analysis

Matrices and Linear Algebra

FALL 2018 COURSES

Graduate Discrete Mathematics

Computational Discrete Mathematics

Mathematical Studies Analysis I

Research and Innovation in Computer Science

Education

Carnegie Mellon University

B.S Computer Science, Expected May 2020

QPA/GPA: 4.0

SCS Dean's List, Fall 2016, Spring 2017, Fall 2017, Spring 2018

Employment

Facebook · Software Engineering Intern

May 2018 to Aug. 2018

- Created, integrated, and shipped a new component of an internal tool using React.js, Flow, and GraphQL
- Wrote Hack scripts and acted as liaison for a mass import of data in order to migrate away from a third-party provider
- Migrated data between storage solutions, pioneering the use of a new migration process

Apple · Software Engineering Intern

May 2017 to Aug. 2017

- Designed and developed new features for iWork for iPad using Objective-C++
- Selected and adapted algorithms from the literature to work for our applications
- Created a fully localized user interface for a concurrent backend algorithm

Mobility Data Analytics Center · Research Assistant

Jan. 2017 to May 2017

- Optimized web interface for traffic prediction models
- Designed and built bikeability visualization using Leaflet.js

TROVE Predictive Data Science · Software Engineering Intern

June 2016 to July 2016

- Integrated Mirage data mocking into Ember.js testing framework
- Added new interface for managing users and fixed dozens of bugs

Projects

In-Sight: Tension-Based Haptic Feedback to Improve Mobility and Navigation for Blind People

2018

- Developed software to control a new wearable navigation assistant for those with visual impairments
- Designed and implemented algorithms for LIDAR perception and haptic feedback

Little-CC: A minimal self-hosting C compiler

2016

- Designed and built a self-hosting compiler for a large subset of C, targeting x86-64 machine code

Frequent Transit Map Generator

2016

- Created a program to generate frequent transit maps from GTFS data with Python

Automatic Particle Detection in Cloud Chambers

2015 to 2016

- Developed algorithms in Python with OpenCV to detect subatomic particles in a homemade cloud chamber

Volunteering

Alpha Epsilon Pi · Philanthropy Chair

Dec. 2016 to Nov. 2017

- Organized and ran many successful service and philanthropic events
- Raised funds for Camp Kesem as part of CMU's Greek Sing philanthropy event

CoderDojo Boca Raton · Founder and Lead Mentor

Aug. 2015 to March 2016

- Taught children ages 7-17 to program using online tools like Scratch and Codecademy

Activities

Alpha Epsilon Pi · Treasurer

Nov. 2017 to Current

- Managed a \$350,000 budget, including a \$250,000/year lease
- Ran payroll and accounted for expenses using QuickBooks

Transportation Club Vice President

2016 to Current

- Volunteered at first annual Pittsburgh Transportation Camp
- Attended lectures and project work sessions about transportation-related issues

Hillelujah · Vice President

2017 to Current

- Organized performances, auditions, and social outings for my a cappella group

FIRST Robotics, FRC Team 3932 · Lead Programmer

2014 to 2016

- Programmed robots in Java and won South Florida Regional in 2014 and 2016

Awards

The William Lowell Putnam Mathematical Competition, ranked Top 200 in 2016 and 2017

National Merit Scholar, National AP Scholar

2016

Salutatorian and Cum Laude Society

2016

Mu Alpha Theta Mary Rhein Memorial Scholarship

2016