

# Zachary T. Zimmerman

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## SKILLS

### Programming Langs

Javascript • Python • Java  
Dart • OCaml • Scheme

### Software Tools

Git • Vim • Unix • L<sup>A</sup>T<sub>E</sub>X  
Emacs • SVN • Perforce

### Web Development

HTML5 • CSS3 • SASS • SVG  
Canvas • Angular • NodeJS  
Gulp • RequireJS • jQuery  
Flask • MongoDB

### Design Software

Illustrator • Sketch • Photo-  
shop • Inkscape • Pixelmator  
Blender • Quartz Composer

## GITHUB

[github.com/  
oneman2feet](https://github.com/oneman2feet)

Pokémon Showdown Bot  
Personal Website • PokeStats  
Dotfiles • Résumé Template  
Computer Generated Art

## INTERESTS

### Tech

Data Visualization • OpenGL  
Computer Graphics • Game  
Design • Web Development  
Algorithms • Functional Pro-  
gramming

### Design

Typography • UI & Interaction  
Design • Lettering • Brand &  
Logo Design • Graphic Design

### Music

A Cappella • Barbershop  
Arranging • Overtone Singing

### Fun

Bodyboarding • Video Games  
Board Games • Rubik's Cubes

## Education

Cornell University College of Engineering

August 2013 - May 2017

B.S. in Computer Science, Minors in Music and Game Design

GPA 4.0 / 4.3

Stuyvesant High School

September 2009 - June 2013

Advanced Regents Diploma, Class of 2013

GPA 4.0

## Work Experience

Microsoft Studios HoloLens Intern

May 2016 - August 2016

- Classified work, unfortunately.

Google Inc. Software Engineer

May 2015 - August 2015

- Implemented a new feature for a data visualization dashboard in the AdWords front-end
- Interfaced with charting library and interpreted server responses to route relevant information

Bloomberg L.P. Software Developer

June 2014 - December 2014

- Developed three cutting-edge data visualization widgets for use in the Bloomberg Terminal
- Used HTML5 Canvas, Javascript, and RequireJS for the fastest possible visuals
- Implemented hit-testing, event-driven interactions, and data-model-world transforms

## Projects

The Butterfly Effect [kongregate.com/games/PeakyYuter/the-butterfly-effect](http://kongregate.com/games/PeakyYuter/the-butterfly-effect)

Aug - Dec 2015

- Analytics
- Level Design

Impulse: Action Platformer Game [gdiac.cis.cornell.edu/gallery](http://gdiac.cis.cornell.edu/gallery)

January 2015 - May 2015

- Rapidly prototyped initial game and level editor in Javascript with SVG and Box2dWeb
- Designed and implemented lazy camera with support for tracking an arbitrary number of targets
- Worked heavily on game graphics, including custom shaders and particle simulator effects

A Sharp: Music Visualizer [github.com/oneman2feet/a-sharp](https://github.com/oneman2feet/a-sharp)

October 2014 - December 2014

- Designed a music visualizer to accurately represent music, rather than just accompany it
- Performed sound analysis with librosa to detect mel frequency spectrum and track beats
- Extracted the foreground to determine the pitch of the melody and estimate the overall mood
- Visualized the music using pyglet for displacement mapping and physically-based animation

## Coursework

Virtual Reality Design, Analytics-driven Game Design, Human-Computer Interaction

2015-2016

Intro Game Design, Analysis of Algorithms, Computer Graphics, Digital Logic

2014-2015

Functional Programming, Discrete Mathematics, Object-Oriented Programming

2013-2014

## Activities

The Cornell Glee Club [gleeclub.com](http://gleeclub.com)

January 2015 - present

- Proud member of the world-renowned choral ensemble
- Sang at Carnegie Hall in April 2015 and toured Mesoamerica in January 2016

Chai Notes A Cappella [thechainotes.com](http://thechainotes.com)

January 2014 - present

- Assistant musical director (2015-2016) and graphic designer (2014-2015)
- Performed at the White House Hanukkah party for Barack and Michelle Obama and guests, including Supreme Court Justice Ruth Bader Ginsburg