

# ROBERT MATYCH

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## Education

Aug 2014–  
May 2018

### Bachelor of Science in Computer Science and Engineering

- University of California, Berkeley
- Regents' and Chancellor's Scholar (top 2% of Berkeley's admitted class)
- GPA: 3.46

## Experience

Sep 2016–  
Present

### UC Berkeley Computer Science Mentors

#### Data Structures Associate Mentor

- Independently teach two small sections adjunct to UC Berkeley's undergraduate data structures course
- Host small, interactive material review sessions for exam preparation
- Current overall performance rating of 4.8/5

Jan 2016–  
May 2016

#### Data Structures Junior Mentor

- Taught a small adjunct section to UC Berkeley's Undergraduate Data Structures course under the supervision of a senior mentor

### Regatta Tropicals

Jan 2016–  
June 2016

#### Site Maintenance Assistant

- Improved and added content to the company's website using HTML5, CSS, and PHP
- Created new graphics for the website using Adobe Photoshop and Illustrator

Aug 2015–  
Sep 2015

#### General Assistant

- Developed small hotkey scripts to automate repetitive actions in the company's accounting and finance software, increasing efficiency by as much as 400%

## Projects

Dec 2016

### Handwritten Digit Classifier (Python)

- Implemented both the Perceptron algorithm and Stochastic Gradient Descent
- Trained a neural network to recognize handwritten digits up to 94% accuracy

Feb 2016–  
Mar 2016

### MIPS Assembler / Linker (C / MIPS)

- Wrote an assembler that translates a subset of the MIPS instruction set to machine code and a linker that generates an executable file from the machine code

Nov 2015–  
Dec 2015

### Gitlet - A lightweight local version control system (Java)

- Built a simple version of Git capable of handling branch merging and file conflicts
- Utilized SHA-1 encryption in conjunction with hash tables to prevent file collision and optimize runtime

Oct 2015–  
Nov 2015

### Logic and AI for Strategy Board Game (Java)

- Implemented the game logic for a text-based version of Lines of Action
- Utilized the mini-max algorithm and alpha-beta pruning to create a computer player that adhered to a defensive strategy

Sep 2015–  
Oct 2015

### Relational Database Management System (Java)

- Built a database system that uses a restricted dialect of SQL

## Languages and Technologies

### Programming

- Java
- Python
- C
- MATLAB
- JavaScript

### Domain-Specific

- HTML5
- CSS
- SQL
- L<sup>A</sup>T<sub>E</sub>X

### Software

- Git
- Unix / Linux
- Windows
- Adobe Photoshop / Illustrator