# William R. Howard Matchen

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# **Education**

- Carnegie Mellon University Class of 2017
  - Bachelor of Science in Physics Computational Track
  - Minor in Computer Science

## Coursework

- Carnegie Mellon University
  - Natural Language Processing
  - Probability Theory and Random Processes
  - Parallel and Sequential Data Structures and Algorithms
  - Matrices and Linear Transformations
  - Numerical Methods

- Advanced Computational Physics
- Advanced Quantum Physics
- Graph Theory
- Great Theoretical Ideas in Computer Science
- Nuclear and Particle Physics

Coursera

Machine Learning by Andrew Ng - Implemented Neural Networks, SVM's, PCA, Anomaly Detection and Recommender Systems.

Gained knowledge of Octave/MATLAB languages.

#### Skills

- Programming Languages: Proficient in Python; Some experience in C/Javascript/HTML/CSS
- Familiar with Git, Unix environment
- Conversational in Spanish

# **Work Experience**

• Software Engineering Intern for CMU Institute for Software Research Summer 2016

- Worked on Usable Privacy Policy Project
- Built regular expressions in Python to segment policy texts for annotation
- Maintained corpus of thousands of policy files
- Software Consultant for Disney Research

**Summer 2015** 

- Developed Python scripts to parse email databases for emoticon usage.
- Analyzed social interactions in corporate hierarchy. Work was mostly self-taught.
- Learned to work with large datasets and multiple software libraries.

### **Activities**

- Carnegie Mellon University
  - Chabad In-House Coordinator, Secretary

Fall 2014 - Present

- Meet weekly with local family to plan, prepare, and serve meals to groups of over forty people.
- Board Member of Jewish Students Association

2014

• Musical Director / Recruitment Chair of C#, an a cappella

Fall 2013 - Fall 2014 Fall 2013 - Present

- Volunteer for 1000Plus
  - Twice-annual event that engages Carnegie Mellon students in over one thousand person-hours of assisting local groups in need.
- Alpha Epsilon Pi Fraternity Alpha Kappa Chapter

### **Honors**

Thomas J. Watson Memorial Scholarship Recipient

2013 - 2017