

# Peter Zhao

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## EDUCATION

### Williams College

B.A. Computer Science, B.A. Mathematics. GPA: 3.77/4.00

**Relevant Coursework:** Data Structures, Algorithm Analysis, Computer Architecture, Computational Linear Algebra, Statistics and Data Analysis, Probability, Graph Theory, Abstract Algebra, Real Analysis, Algorithmic Game Theory, Machine Learning

Williamstown, MA

Expected June 2021

### Acquincum Institute for Technology

Study Abroad in Budapest

**Relevant Coursework:** Combinatorial Optimization, Theory of Computing, Networks and Dynamics, Semantic & Declarative Technologies

Budapest, Hungary

Jan 2020 - May 2020

### Thomas Jefferson High School for Science and Technology

Advanced Diploma. GPA: 4.23

Alexandria, VA

Aug 2013 - May 2017

### Harvard Business School, HBX

Credentials of Readiness: Business Analytics, Economics for Managers, Financial Accounting

Cambridge, MA

June 2018 - August 2018

## TECHNICAL SKILLS

- **Languages:** Python, C, C++, JavaScript/TypeScript, Clojure, Go, Java, R, HTML, Prolog
- **Libraries:** Numpy, Matplotlib, SciPy, NetworkX, Scikit-Learn, Pandas, React/React Native, D3.js, Mocha
- **Technologies:** Unix, GitHub, ~~Flux~~

## EXPERIENCE

### J.P. Morgan

Software Engineering Intern

Chicago, IL

June 2020 - Present

### Williams College Computer Science

Research Intern, Professor Daniel Barowy

Williamstown, MA

June 2019 - December 2019

- **SWELL:** Researched a self-repairing parser combinator library using TypeScript that can detect syntactic parsing errors, determine a possible fix using minimum edit distance, and return an easy-to-read error message based on error stream
- Created looping structures in the SWELL programming language and constructed locks on direct manipulation if behavior was ambiguous. Implemented a lesson constructor to make lesson development more user-friendly

### Williams College Psychology

Research Assistant, Professor Safa Zaki

Williamstown, MA

January 2019 - December 2019

- Implemented modular experiment development procedure by implementing the jsPsych library and organized workflow using GitHub
- Conducted research in categorization tasks to determine if blocking or interleaving is better for learning unique individual elements
- Developed and ran Amazon Mechanical Turk experiments, optimizing on experimental costs and data precision

## PROJECTS

- **GoTED:** A Go implementation of the Zhang-Shaha Algorithm, which computes the edit distance between two trees (WIP)
- **C++uckoo:** A C++ implementation of a Cuckoo Filter using a variety of hashing techniques
- **Firestone:** A Heathstone clone developed in Clojure to focus on functional programming software design paradigms
- **Community Detection:** Implementation and testing of the Girvan-Newman Algorithm in Python for detecting communities in networks

## VOLUNTEER EXPERIENCE

### Microsoft TEALS

Volunteer

July 2020 - Present

- Supported teachers in teaching and developing a fundamental computer science curriculum for high school students to increase access to a tech-focused education

### Reboot For Youth

Chief Technology Officer

Fairfax, VA

Sept 2014 - May 2017

- Refurbished over 300 computers to donate to low-income students in need to technology for schoolwork
- Partnered with Lenovo, CNN, Nickelodeon, WeddingWire and Keepod for fundraising efforts

## ADDITIONAL EXPERIENCE & ACHIEVEMENTS

- **Teaching Assistant** for Algorithm Analysis: Fall 2019
- **Teaching Assistant** for Linear Algebra: Fall 2018
- **Tutor** for Data Structures & Algorithms and Linear Algebra: Spring 2019
- **Treasurer** of All Campus Entertainment at Williams College: 2019-2021
- **President** of the Chinese American Student Association: 2018-2019
- **President** of the Williams Questbridge Chapter: 2018-2019
- Placed **4th** at Google Tech Challenge: Cambridge 2018
- Placed **1st** in Creative Category at HackDartmouth 2017
- Jack Kent Cooke Scholar and Questbridge Scholar
- Conversationally fluent in Chinese and Shanghaiese