

# Richard Zhao

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📄 <https://richardzhao2.github.io/>

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## Education

Aug 2016 | **BS in Statistics & Machine Learning, Minor in Computer Science,**  
May 2020 *Carnegie Mellon University, GPA: 3.42/4.0, Pittsburgh, PA.*

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## Work Experience

- May 2018 – **Technical Intern, ASTM International, Conshohocken, PA.**
- Aug 2018
- Designed, developed, and improved UI/UX with Bootstrap and Material design for in-house statistical reporting and proficiency testing software.
  - Developed software to parse databases, classify thousands of users, and automate database maintenance and integrity verification process with cosine similarity and hierarchical clustering algorithms.
  - Extracted and cleansed data for hundreds of program-participant test samples to develop a pipeline for data analysis and visualization with external R scripts.
- May 2017 – **Instructor/Curriculum Developer, Digital Media Academy, Cambridge, MA.**
- Feb 2018
- Lead instructor for iOS development, Game Programming, and Advanced Java
  - Developed and revamped course curriculum for advanced Java course

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## Skills

Languages Python, Java, C, C#, Javascript, HTML/CSS, SQL, R, MATLAB  
Technical Django, ggplot2, NumPy, JUnit, Swing, Bootstrap, Git, LibGDX

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## Projects

**Pittlets, Python, Django, Bootstrap, SQLite3.**

Platform to help students in the Pittsburgh area solve their housing issues. Making it easy and safe for students to find/post sublet listings, find/transfer expiring leases, and fill up any roommate vacancies.

<https://github.com/richardzhao2/pittlets>

**Engage, Bootstrap, Flask, Node.js, Pandas, Sci-Kit Learn.**

The machine learning pipeline as an intuitive web application, allowing students to learn about machine learning and professionals to go from feature selection to model evaluation and data set analysis without prior technical knowledge.

<https://github.com/richardzhao2/engage>

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## Relevant Coursework

*Data Structures and Algorithms / Mathematical Software / Fundamentals of Computer Science / Discrete Math / Statistical Methods and Data Science / Software Construction / Probability Theory / Statistical Visualization / Computing for Good / Web Prototyping / Machine Learning / Statistical Inference / Statistical Computing*

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## Activities

**Student Developer, Coding for Good.**

Work with local hospitals and UPMC to conceptualize and develop applications that can detect abnormal body behavior through body-worn sensors, recognize atypical changes in human position and behavior in crowds with computer vision and time series anomaly detection, improve location transmissions to EMS, and analyze 911 operator calls with natural language processing.