Richard Zhao

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https://richardzhao2.github.io/

Education

Aug 2016 | May 2020 **BS in Statistics & Machine Learning, Minor in Computer Science**, *Carnegie Mellon University*, GPA: 3.33/4.0, *Pittsburgh, PA*.

Work Experience

May 2018 – Aug 2018 **Technical Intern**, *ASTM International*, Conshohocken, PA.

- 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 to generate scientific reports.

May 2017 – Feb 2018 **Instructor/Curriculum Developer**, *Digital Media Academy*, Cambridge, MA.

- Lead instructor for iOS development, Game Programming, and Advanced Java
- Developed and revamped course curriculum for advanced Java course

Skills

Languages Python, Java, C, C#, Javascript, HTML/CSS, SQL, R, MATLAB

Technical Pygame, NumPy, JUnit, Swing, React.js, Bootstrap, LibGDX, JIRA, Git, Unix

Projects

Engee, *Bootstrap, Flask, Node.js, Pandas, Sci-Kit Learn.*
Web application that acts as a sandbox for the machine learning pipeline, enabling students to learn about machine learning and professionals to use different models to analyze data sets without technical knowledge.
https://github.com/richardzhao2/engee

Schedulize, *Python, Pandas, Sci-Kit Learn, PyGame.*
Application that uses a recommender system, latent semantics analysis, and decision trees to create optimal class schedules for students based on past course performance and preferences. Winner of Best Design at HackCMU.
https://github.com/richardzhao2/Schedulize

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 / Human Information Processing and Artificial Intelligence / Coding for Good / Data Management

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, improve location transmissions to EMS, and analyze 911 operator calls with natural language processing.