RICHARD ZHAO

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EDUCATION

Carnegie Mellon University
GPA: 3.43/4.0 | May 2020
B.S. in Statistics and Machine Learning
minor in computer science

RELEVANT COURSEWORK

COMPUTER SCIENCE

Machine Learning
Algorithms and Data Structures
Fundamentals of Programming
Software Construction
Web Prototyping
Imperative Programming
Interaction Design

STATISTICS / MATH

Probability Theory
Discrete Math
Linear Algebra
Statistical Inference
Statistical Visualization (ggplot2)
Data Visualization (d3.js/Tableau)
Modern Regression
Introduction to Data Science
Statistical Computing
Multivariable Calculus
Statistical Methods
Modern Regression

SKILLS

LANGUAGES

Python, Java, Javascript, C (familiar), R, SQL

TOOLS & FRAMEWORKS

Git, React, Django, d3.js, HTML/CSS, Shiny, ggplot2, openCV, numpy, pyautogui, JUnit, Spring Boot, Material-UI

MISC

Sony Vegas, OBS, Audacity, LaTeX

EXPERIENCE – INDUSTRY

Capital One — mclean, va
software engineer intern — june – aug 2019
- Developed data dashboard with React and d3.js to visualize 100+ million customer records and to evaluate overall data pipeline health.
- Implemented real time tracking and logging of customer information files from different lines of businesses.
- Built RESTful API with Spring Boot to abstract querying from Spark log files and core customer databases.

ASTM International — conshohocken, pa
technical intern — may – aug 2018
- Designed and improved UI for in-house statistical reporting software with Bootstrap and Material design.
- Developed software to parse databases and classify thousands of users with hierarchical clustering algorithms.
- Extracted and cleansed data for hundreds of client samples to construct a pipeline for data analysis and visualization with external R scripts.

Digital Media Academy — cambridge, ma
curriculum developer / instructor — may – aug 2017
- Lead instructor for iOS development, Game Design, and Advanced Java.
- Led team of 3 to devise and revamp curriculum for advanced Java Course.

ACTIVITIES

Computing for Good
student developer
- Collaborated with local hospitals and UPMC to create applications to detect abnormal body behavior through body-worn sensors.
- Developed software to recognize atypical changes in human position and behavior in crowds with computer vision and time series anomaly detection.
- Analyzed thousands of 911 operator calls with natural language processing to improve location transmissions to EMS.
- Featured by Metro21 Smart Cities Institute.

PROJECTS

Pittlets | python, django, bootstrap, sqlite3
- Platform to help students solve housing issues. Making it easy for students to find roommates, post sublet listings, and transfer expiring leases.

Schedulize | python, pandas, sci-kit learn, pygame
- Recommender system for course suggestions based on a student's academic record. Awarded **Best Design Hack Winner** at HackCMU.