ANGELA (ZI LAN) ZHANG

GitHub: https://github.com/azhang4216 | Personal Website: http://angelazz.me
Email: angela.zhang.23@dartmouth.edu | LinkedIn: https://www.linkedin.com/in/angela-zl-zhang

EDUCATION

Dartmouth College, Hanover, NH **Expected June 2023**
B.A. Computer Science and Quantitative Social Science GPA 3.83/4.0
Honors/Awards: Honors Roll Recipient, Recruited Division I Athlete, All-Time School Program Record Holder for Women's Golf

York House High School, Vancouver, BC **June 2019**
Honors/Awards: 5x Honors Roll, AP Scholar with Distinction, National AP Scholar, AP International Diploma GPA 4.0/4.0

PERSONAL TECHNICAL PROJECTS (IN REVERSE CHRONOLOGICAL ORDER)

To-Do List Web App (Fullstack) | https://github.com/azhang4216/to-do-list **January 2021**
- Created using Node.js with Express.js and other JS frameworks / libraries including mongoose, body-parser, dotenv, ejs, lodash
- Deployed the web app with a MongoDB Atlas cloud database to Heroku

Simon-Says Game (JS) | https://github.com/azhang4216/simon-says **January 2021**
- Made a fun, interactive, visually-and-auditorily-simulating game using JS, DOM manipulation, jQuery

Pine Beetle Infestation Visualization and Prediction Web Tool (Fullstack) | https://pine-beetle-prediction-dev.netlify.app **September – November 2020**
- Built and deployed a web tool backed and funded by the US Forest Service
- Visualized southern US pine-beetle outbreak data and generated outbreak predictions in an interactive format
- Integrated designers' UI/UX research and design on client-side using React.js, Redux, and front-end JS libraries
- Improved prediction generation time from several minutes to seconds by rewriting the backend data pipeline using Express.js and Mongoose

Amazon Product Quality Prediction Tool (ML) | email me if interested in seeing code **September – October 2020**
- Developed a machine learning model that predicts the quality of an Amazon grocery product with high precision and recall (F1 = 0.87)
- Cleaned and processed product review data using TFIDF vectorizer, normalizing, and SMOTE oversampling
- Trained several classifiers using processed data, e.g. logistic regression, naïve bayes, decision tree, linear SVC, k-neighbors, neural networks

Adaboost Algorithm from Scratch (ML) | https://github.com/azhang4216/ML-Adaboost **September 2020**
- Wrote an Adaboost Algorithm compatible with any ML classifier from scratch, showing deep understanding of classifiers
- Improved F1 score by roughly 0.7 across all 3 ML classifiers tested using this Adaboost Algorithm alone

Sudoku Backtracking Solver (Algorithms) | https://github.com/azhang4216/sudoku-solver **August 2020**
- Inspired by matrix problems, developed an efficient sudoku solving algorithm that runs at $O(n^m)$ instead of brute force $O(n \wedge n^2)$

Personal Website (Frontend) | https://github.com/azhang4216/angelazz.me **April 2020, with ongoing updates**
- Created with HTML/CSS/JS and Bootstrap
- Set up hosting and DNS with registered domain

Twitter-Reddit Content Sharing Optimization (Python, API) | https://github.com/azhang4216/reddit-twitter-api **April 2020**
- Made with only introductory CS knowledge and self-study, with goal of uplifting people during shelter-in-place with memes and laughter
- Leveraged Reddit's effective upvote system and Twitter's accessibility for optimal content sharing through Twitter and Reddit's APIs, allowing users to tweet / source top-rated subreddit memes

Independent Research: Divisions of Wealth at Dartmouth College (R, Statistics)| https://github.com/azhang4216/divisions-of-wealth **September 2019**
- Conducted a campus-wide independent research inspired and fascinated by the socio-economic diversity at Dartmouth
- Yielded a statistically significant yet minor result of non-wealthy appearing students appearing more friendly than wealthier counterparts

WORK EXPERIENCE

Digital Applied Learning and Innovation (DALI) Lab, Hanover, NH **August 2020 - Current**
Software Engineer
- Admitted as one of the youngest members to the tech-entrepreneurial program after a rigorous selection process
- Created products for companies around the world in teams of designers, engineers, PMs
- Most recently a full-stack and data visualization developer for a web-based beetle outbreak prediction project (see project above)

Dartmouth Academics Skill Center, Hanover, NH **April 2020 – Current**
CS1 Teaching Assistant & Math and CS Tutor
- As a TA, led weekly coding sessions for students, grading and reviewing their code and homework
- As a tutor, helped 5 assigned peers to achieve 90%+ in Calculus and Python classes in a 1:1 setting
- Provided feedback to simplify complex concepts, debug, improve efficiency and decrease memory usage
- Established trust by being accessible, patient, and empathetic

HACKATHONS & EVENTS PARTICIPATION

- Grace Hopper Celebration 2020, HackDavis 2021, FemmeHacks 2021

LEADERSHIP, ATHLETICISM & CO-CURRICULAR ACTIVITIES

Dartmouth Women's Golf, *Division I Student Athlete* **August 2019 – June 2020**
- Collegiate Awards: All-Time Dartmouth Program Record Holder, WGCA All-American Scholar, Rookie of the Year, Co-MVP
- Pre-Collegiate Awards: BC Junior Girls Champion 2019, Canadian National Future Links Champion 2017, T3 Canadian Junior Girls 2018

Women in Computer Science, *Member* **September 2019 – Current**
- Formed an active, supportive community of women in CS at Dartmouth through meetings, professor events, discussions, mentorship, etc.

Dartmouth Agape Student Group, *Outreach & Event Coordination Committee* **September 2019 – Current**
- Spearheaded club promotion and outreach to incoming freshmen, resulting in 20+ new freshmen members
- Transformed and adapted membership events to an online format in unprecedented COVID times