Catherine Zhang

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Education

University of Michigan | Ann Arbor, MI   *Expected May 2022*

Bachelor of Science in Computer Science/Psychology, Minor in Business
- GPA: 3.75/4.0
- Relevant Coursework: Algorithms & Data Structures, Database Management, Web Systems, Software Engineering, Human-Centered Software Design and Development

Experience   *Jan 2019 - Jan 2020*

Machine Learning and Biometrics Research Assistant | University of Michigan
- Executed PostgreSQL queries on university databases containing clinical data from over 4 million patients to extract relevant data into compatible file formats for further usage in diagnoses
- Cleaned data using Python libraries to account for missing data and variations in data type
- Successfully trained models to predict spinal abnormalities and make differential diagnoses between soft-tissue disease and multiple sclerosis with over 80% accuracy

Coding Projects

Personal Website | zhangscat.github.io   *Aug 2020*

Gotta Catch 'em All   *Dec 2019*
- Generated optimal routes for a simulated Pokémon game by utilizing adjacency matrices to implement Prim's algorithm and branch-and-bound algorithms on any given map of Pokémon
- Created data structures to differentiate between terrain and store Pokémon location
- Optimized code to run in less than 2 seconds on test cases of 10,000+ samples
- Developed functions for command line and error handling to set flags and ensure proper input

Euchre Game Simulator   *Mar 2019*
- Implemented program from scratch to simulate 4-player Euchre game with user input
- Honed object-oriented programming skills by coding 6 classes to represent cards and players
- Designed rigorous testing suites for each class to catch bugs and assess member functions

Disease Detective | MHacks   *Oct 2018*
- Outlined and implemented program to diagnose foodborne diseases with team in under 3 days
- Utilized APIs to create chatbot to prompt user for symptoms and respond with predicted disease

Skills
- **Programming Skills:** C/C++, SQL, Java, HTML/CSS, Python, Git, Matlab,
- **Miscellaneous:** Microsoft Office, Canva, Adobe Illustrator, Mandarin

Activities

Server and Cashier | **Sadako Japanese Restaurant**   *Jan 2020 - present*
Executive Board Officer | **Kappa Phi Lambda Sorority Inc.**   *Jan 2019 - present*
Co-Leader | **K-motion Dance Group**   *Sept 2018- present*
Design Chair | **Generation Asian Pacific American Culture Show**   *Nov 2019 - May 2020*