CATHERINE ZHANG

catzhang@umich.edu • (408) 896-4828 • https://www.linkedin.com/in/catzhang24/

EDUCATION

2018 – 2022 **UNIVERSITY OF MICHIGAN**   **Ann Arbor, MI**
B.S in Computer Science, Psychology | Minor in Business
GPA: 3.75/4.0
- Relevant Coursework: Algorithms & Data Structures, Database Management, Web Systems, Operating Systems, Human-Centered Software Design and Development, UI/UX Design

EXPERIENCE

2021 – 2021 **META (formerly Facebook)**   **Menlo Park, CA**
Summer
Software Engineering Intern, AI New Experiences Team
Previously slated to join full-time in Dec. 2022
- Collaborated with machine learning research team to develop feature to create logical groupings of user-uploaded media based on acoustic events and audio similarities.
- Optimized GraphQL data schema and APIs to facilitate efficient search through generated media tags.
- Implemented critical error-checking functions in large-scale codebases to ensure product reliability.
- Reduced team project delivery time by individually learning four codebases in 5 programming languages and collaborating with other teams to complete project 2 weeks ahead of schedule.

2022 – Present **ENGINEERED MEDICAL GROUP INC.**   **Los Angeles, CA**
Contracted Web Designer/Developer
- Spearheaded website and UX design, resulting in a responsive, aesthetic, and user-friendly website.
- Worked with one other developer to build website using HTML/CSS, React, and vanilla Javascript.
- Implemented features such as adaptive navbars/footers, email newsletters, and search.
- Facilitated cross-functional meetings in an agile environment to incorporate client visions with industry standards, utilizing iterative development to ensure client satisfaction during the process.

2019 – 2020 **UNIVERSITY OF MICHIGAN**   **Ann Arbor, MI**
Machine Learning and Biometrics Research Assistant
- Executed PostgreSQL queries on databases containing clinical data from over 4 million patients.
- Created Python scripts to normalize, transpose, and impute data values and measure model fitting.
- Identified pertinent biometrics and resolved blockers by researching available datasets and models.
- Trained models with sklearn and NumPy to differentiate between spinal diseases with >80% accuracy.

PROJECTS

2021 **C++ THREAD LIBRARY**
- Implemented C++ thread library for multiprocessor Linux operating systems, including support for conditional variables, mutexes, and thread lifetime management operations such as yield and join.
- Developed 4 classes to simulate CPU processes using object-oriented programming principles.
- Utilized atomic guards to allow for multi-threading and context swaps to minimize busy waiting.

2020 **WIKIPEDIA SEARCH ENGINE**
- Created Hadoop style MapReduce server in Python using TCP sockets and manager-worker protocol.
- Implemented load balancer and heartbeat messages for fault tolerance in worker server failures.
- Developed Flask app and REST API to return PageRank algorithm search results in JSON format.
- Built front-end UI to display results using React and deployed application on AWS EC2 clusters.

ACTIVITIES

2018 – 2022 **K-MOTION DANCE TEAM**   **Ann Arbor, MI**
2020 - 2022 **Co-President**
- Committed 10+ hours/week to lead practices, direct performances, and organize bonding activities.
- Coordinated with other teams to manage collaborations of 30+ dancers and 45+ hours of practices

2019 – 2022 **KAPPA PHI LAMBDA SORORITY INC.**   **Ann Arbor, MI**
2020 - 2022 **Executive Board Officer**

ADDITIONAL

Technical Skills
- C/C++, SQL, Java, JavaScript, React.js, Vue.js, HTML/CSS, Python, Git, GraphQL, Bash

Interests
- Learning languages, traveling, badminton, dance, puzzle games