Xiangyu Qin

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https://github.com/tommy2022 https://tommy2022.github.io/tomistagram

EDUCATION

University of Michigan, Ann Arbor, MI   *Sept 2019 – May 2023*

B.S Computer Science, Minor in Mathematics   *GPA 3.90/4.00*

James B Angell Scholar, 4 term University Honors, William J. Branstrom Freshman Prize

Coursework: Data structures and Algorithms, Machine Learning, Web systems, Introduction to OS, Software Engineering, Linear Algebra

EXPERIENCE

Cookpad Inc. – Tokyo, Japan   *Aug 2021 – Aug 2021*

Software Engineer Internship

- Optimized performance of company's main service website from ~2 seconds to instant load after first access by integrating SWR to prevent repeated API requests to My Folder each time the side bar is opened.
- Assisted in delivering MVP by developing websites using Next.js with TypeScript for front-end and Ruby on Rails for back-end GraphQL API.

PID inc. – Tokyo, Japan (Remote)   *Sept 2020 –Aug 2021*

Full Stack Internship

- Developed a 30+ paged master management web system starting from the requirement elicitation and designing stage using React.js and Laravel.
- Remodeled how company records and project progresses are managed by automating monthly data entry, calculations, and data visualization.

University of Michigan, College of Engineering, Ann Arbor, MI   *Aug 2020 – Present*

EECS 203 (Discrete Math) Teaching Assistant

- Delivered a range of teaching activities in a core CS course with 900+ students including assisting in lectures, writing and reviewing homework/exam questions, and holding weekly discussion and office hours,
- Administered exams as the Exam Management Lead by establishing detailed timelines and deadlines, coordinating with all staff members with tasks, and introducing new techniques to streamline the delivery of the exams.
- Facilitated student understanding by answering 1500+ questions on Piazza and ensuring all questions are answered.

University of Michigan, School of Information, Ann Arbor, MI   *Dec 2021 – Present*

Research Assistant

- Assisted in investigating the impact of paywall introduction on news content in local newspapers
- Experimented with topic modeling techniques like LDA and GloVe to examine the trend in topics across the years

PROJECTS

Game website – JavaScript, PHP

Sudoku, Tetris, Flappy Bird, Space Invader.

- Optimized sudoku puzzle generation to under 1 millisecond by utilizing bit-wise operations and combining backtracking and 2 sudoku specific algorithms.
- Stimulates competition by displaying a leaderboard of user high scores for each game.

Handwritten Table Recognition – Python

- Developing an OCR for handwritten table records to replace manual inputting of swimmer's training records.
- Applies image processing techniques using SciPy and OpenCV to extract data cells and now reading papers to tackle digit segmentation.

Piazza Post Classifier – C++

- Classifies Piazza posts' label based on the post content through supervised learning using Multivariate Bernoulli Naïve Bayes Classifier
- Parses data from csv files to calculate the likelihood of a post belonging to each of the labels.

SKILLS AND HOBBIES

Technologies and languages: *Proficient – C/C++, Python, JavaScript/TypeScript, React, Next.js, HTML/CSS, Git, Flask*

Familiar – SQL, Ruby, Ruby on Rails, Swift, AWS

Natural Languages: English, Japanese and Chinese

Hobbies: Swimming, Triathlon, Jigsaw puzzles, Super Smash Bros, and recently got into cooking