Diana (Jiayu) Xu

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EDUCATION

Cornell University, New York, NY   May 2024
Master of Engineering in Computer Science | GPA: 3.855

University of Michigan, Ann Arbor, MI   May 2023
Bachelor of Science in Computer Science and Data Science | GPA: 3.779

COURSEWORK

- Web Systems, Object-Oriented Programming, Data Structures and Algorithms, Cloud Computing, Foundation of Computer Science, Database Management System, UI/UX Design
- Computer Vision, Machine Learning, Human-Computer Interaction

WORK EXPERIENCE

Sumitovant Biopharma Ltd., Software Engineer Intern, New York, NY (Remote)   May 2022- August 2022

- Designed a web application tool in Flask for data analysis and visualization, enabling XML data uploads and automating data processing by integrating **Python** and **R** environments, reducing manual effort by **40%**
- Optimized workflow to extract and synthesize metrics from **400+ research data files simultaneously within 8 seconds**
- Performed clear code review of in-house medical data search engine on GitHub, reorganizing code structure and enhancing maintainability by **15%**

Sumitovant Biopharma Ltd., Data Analyst Intern, New York, NY (Remote)   Aug 2021- Dec 2021

- Conducted comprehensive Network Meta-Analysis (NMA) of continuous, binary, and proportional clinical trial data across multiple studies in **R**, identifying trends in treatment efficacy and safety that influenced strategic decisions
- Automated data quality checks and streamlined reporting pipelines, improving data processing speed by **25%** while ensuring data integrity and reproducibility for regulatory review

PROJECTS

HugMed Venture Software Development   Jan 2024 - Present

- Spearheaded **a team of 3** to develop a full-stack serverless medication tracking application from 0 to 1 for a healthcare technology startup venture backed by Cornell University, amplifying medical adherence for elder patients and caregivers
- Implemented and updated user authentication, medication management and tracking features with **Agile** methodology using **Vite, React, Node.js,** reducing manual intervention by **50%**
- Leveraged **AWS** (including API Gateway, Lambda, and DynamoDB) and **Supabase** services to create a highly scalable and reliable backend infrastructure, enabling seamless user interactions and real-time medication tracking
- Redesigned **database architecture** and optimized **SQL** schema, achieving a **10%** reduction in overall query time
- Collaborated with cross-functional teams by using Trello; Initiated UI wireframes in **Figma** to support product pitches, directly contributing to successful securing of **$5,000** in entrepreneurship awards
- Created clear source code documentation and user journey maps, refining patient-caregiver workflows for improved usability

NewSearch Website [Product Site]   August 2023 - Dec 2023

- Built a responsive news search application from ground up using **Next.js, React, and JavaScript**, integrating New York Times API for real-time article retrieval and display
- Architected and implemented **Firebase** Authentication and **Firestore** to manage user sign-in, like/unlike functionality, and store favorite news articles in a personalized user portal
- Employed **Git** version control to manage collaborative workflows, ensuring efficient and organized code contributions

Instagram-like Web System [Github]   Aug 2022 - Dec 2022

- Produced an Instagram-like web application with **RESTful API** and a user interface on both server-side and client-side to support creating accounts, following, liking, commenting, uploading photos, and more
- Integrated with **React** (JavaScript) for front-end, **Flask** (Python) for back-end, **JSON** for data interchange, **SQLite** for database, and **pytest** for API unit testing, with deployment to **AWS EC2**

Automated Subject Classification of Piazza Posts   Aug 2021 - Dec 2022

- Developed a Naive Bayes classifier in **C++** to classify Piazza posts using natural language processing and machine learning

TECHNICAL SKILLS

Language: JavaScript, TypeScript, Python, C++, HTML, CSS, SQL, Bash, Java
Frameworks: React, Node.js, Next.js, Flask, Tailwind CSS
Technologies: AWS, Supabase, Firebase, MongoDB, Linux
Productivity: Visual Studio, Slack, Git, Version Control, Trello, Jira