Joe Chen

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Education

Northeastern University **Seattle, United States**
Master of Science in Computer Science | GPA: 4.0/4.0 Sep 2022 – May 2025

Professional Skills

- **Languages:** Java, Python, JavaScript, Ruby, Golang, C++, TypeScript, Swift, HTML, CSS, SQL
- **Framework/Tools:** React, AWS Services, GraphQL, Flask, Heroku, Docker, Git, Node, Spring, Maven, Agile, Jira

Work Experiences

Amazon Web Services(AWS redshift team) **East palo alto, CA**
Software Dev Engineer Intern Summer 2024

- Enhancing the **generative AI** (Amazon Q) integration within Redshift Console using **LLM, BedRock, RAG**.
- Utilizing python, BedRock knowledge base and **LLM Claude 3 Sonnet model** to figure out the work flow of Amazon Q. Use python to crawl all redshift urls and classified them into different categories and inject into base

IpserLab(United States Hybrid) **Seattle, Washington**
Software Development Engineer Intern Sep 2023 – Jan 2024

- Developed a cross-platform community network app for college students to connect with peers and employers.
- Implemented front-end with **React** components and create **RESTful APIs** to integrate with Flask and **PostgreSQL** backend.
- Utilized Agile Scrum methodologies in biweekly sprints throughout product development with 2 teams.
- Conducted comprehensive API testing using **Postman** to validate functionality of RESTful endpoints and Implemented **CI/CD** pipelines utilizing **Github** for code review and uploads, with **Jenkins** for deployment.

Project Experiences

Wellness Tracker and Community platform | Java, SpringBoot, MySQL, AWS, Kafka

- Built a Health-focused Microservice Platform via **ElasticSearch** and **SpringBoot**, where users can record and track health metrics, set personalized wellness goals, and benefit from shared health experiences.
- Implemented a robust user registration process via SendGrid and AWS **DynamoDB** with throttling against verification code requesting rate with a rate limit of 1/PT5M.
- Established one-to-many, one-to-one table relationships, and used AWS DynamoDB for user registration and data persistence, while health-related attachments are stored on Amazon S3.
- Optimize health data availability through **Kafka** for synchronization between MySQL and ElasticSearch.

Full stack B2C E-commerce platform(Ruby on rails) | Ruby, Ruby on Rails

- Developed a robust B2C E-commerce platform in **Ruby on Rails**, adhering to the **MVC** architectural pattern for code modularity and maintainability.
- Improved system performance by **23%** through the implementation of efficient **nested routes** for product image uploads and deletions, and Ensured the platform's reliability with **RSpec unit testing**.
- Designed an intuitive **admin** interface, streamlining category and product management, and incorporating the View layer for user-friendly **navigation** to boost platform productivity.

Distributed System MapReduce Word Count | golang

- Developed a distributed file processing system for counting words information leveraging **MapReduce** mechanism, achieving a 30% efficiency boost in word counting for large datasets.
- Used **golang's** net/rpc libaray to make **RPC call** between master and worker, ensuring task assignment to mappers or reducers.
- Architected fault-tolerant mechanisms in master to detect scenarios where workers may fail within a reasonable time.

Full Stack Tour Booking System | React, Node, MongoDB

- Applied **React.js**, Tailwind CSS, JavaScript on frontend, and utilized **Node.js**, Express to implement routing on backend within the **MVC** architecture, reducing **22%** code redundancy, allowing users to log in and book tours.
- Connected to **MongoDB** Atlas database and Implemented CRUD operations utilizing Mongoose, and performed thorough API testing using **Postman**. Applied JWT to achieve **authentication**.