Yuhan Meng

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EDUCATION

Northeastern University, Khoury College of Computer Sciences, Seattle, WA   Jan 2023 - Expected Jun 2025
Master of Science in Computer Science
Relevant courses: Data Str, Algo & App in CmpSys, Object Oriented Design and Analysis

Northwest A&F University, Shanxi City, China   Sep 2017 - Jul 2021
Bachelor of Economics in Finance
Relevant courses: Artificial Intelligence and Information Society, Information System and Database Technology, Fundamentals of Programming, Fundamental of Computer Science

TECHNICAL SKILLS

Languages: Python, Java, C, Javascript, HTML, CSS,
Frameworks and Libraries: Spring, Spring MVC, React, Node.js, JUnit, NumPy
Database & DevTools: MongoDB, DynamoDB; AWS, Redis, Kubernetes, Docker, Git

PROJECTS

Ski company Monitor System

- Developed a server API using **Java servlets** and deployed it on **Apache Tomcat**, catering to customer information collection, lift using, attendance tracking,.
- Hosted **AWS EC2** instances, using **Elastic Load Balancer** to ensure system availability and scalability, improving thoughput 40%, accommodating the growing number of visitor.
- Implemented **RabbitMQ** for real-time communication to increase system efficiency and reduce latency, keeping the number of message under 100.
- Optimized database performance by tuning queries, and implementing caching strategies using **Redis** and **DynamoDB**.
- Monitored application performance and resolved issues using **AWS CloudWatch**, maintaining a stable and reliable system operation.

AI-Powered Interactive Chess Application

- Developed an interactive chess application using **Python** and Processing Python (Graphics Library) and implemented an efficient AI battle algorithm, achieving an AI win rate of over 50%.
- Created a data collection workflow to process chess game data daily, stored the data in an **DynamoDB** database, and analyzed the data to enhance the game experience and track AI design effectiveness.
- Optimized the game-winning percentage by updating the Minmax algorithm of the AI solution according to the game data analysis results.
- Performed comprehensive unit testing, reducing the error rate by 20% and ensuring code quality and system reliability.
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Distributed Ticketing System - Full Stack Application   Jan 2023 - Apr 2023

- Developed a **microservices-based** ticketing booking application using **Node.js** and **React**.
- Implemented an automated order expiration feature, leveraging **Bull.js** for task scheduling and **Redis** for backend storage.
- Integrated **Stripe API** to handle and process user payments, ensuring secure and efficient transactions.
- Containerized the platform's microservices with **Docker** and orchestrated deployment to **Google Cloud Platform** using **Kubernetes**. Configured and utilized Google Cloud's **LoadBalancer** for high availability and traffic distribution.
- Implemented user authentication using **JWTs** stored in cookies, with a designated expiration for enhanced security.