Zhuang Tang

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Personal Portfolio https://tonytang0909-grl.github.io/Zhuangtang/

SUMMARY

Double master of computer science with strong programming, analytic and problem solving skills. Has a wide range of project experience including web application development and machine learning, 4+ years of programming experience for building stable full stack project, strong knowledge of computer science, mathematics and programming skills in Java, C++,Python, Database SQL, HTML, CSS and Javascript.

SKILLS

- Languages: C++ (Proficient),Java(Proficient), Dart(Proficient),Python (Intermediate), JS/CSS/HTML (Intermediate)
- Frameworks: SpringBoot (Proficient), Vue/React (Intermediate), Node.js (Proficient), Flutter(Proficient)
- Systems and Development Tools: Linux/Unix, Docker, Git, Jenkins, JetBrains, Kubernetes
- Databases: MySQL, Redis, Mongo
- Cloud Service: AWS(proficient)

EDUCATION

- University of Adelaide -> Master of Computing and Innovation (expect to graduate 2024)
- University College Dublin -> Master of Computer Science (2012-2013)
- Minzu University of China -> Bachelor of Electronic Engineering (2008-2012)

EXPERIENCE

SOFTWARE ENGINEER, SINO ENGINEERING CHINA, BEIJING — 2018-2022

- Spearheaded the integration of microservices architecture, enhancing application modularity and scalability.
- Championed CI/CD integrations using Jenkins and Docker, reducing deployment times by 40%.
- Collaborated with cross-functional teams to streamline DevOps processes, employing Kubernetes for container orchestration.
- Devised and implemented a GraphQL API layer, offering flexible data querying and reduced over-fetching of data.
- Employed industry-standard tools and frameworks for optimal full stack development, including but not limited to Node.js, React,and Spring Boot.
- Utilized containerization technologies, such as Docker, for seamless deployment and scaling of microservices.

PROJECTS

COST OPTIMISATION SYSTEM FOR MINING INDUSTRY

Objective

Engineer a system to identify and implement the most cost-effective pathways between devices within the mining industry.

Frontend

- Utilised Vue3 with Vuex for state management, enhancing frontend responsiveness and user experience.
- Integrated WebSockets ensuring real-time updates on route costs and device management.

Backend

- Migrated data storage to a cloud-native MySQL solution with automated backup and disaster recovery features.
- Deployed a multi-threaded environment to execute Dijkstra, Yen's, and A* algorithms simultaneously.
- Implemented GraphQL for more efficient, tailored data retrieval and reduced API endpoint maintenance.
- Integrated Apache Kafka for real-time data streaming and processing.

FULL STACK NEWS AND PRODUCT MANAGEMENT SYSTEM (CMS)

Objective

Developed a comprehensive full-stack web application template for news and product management, applicable to various organizations.

Key Features

User-Facing Frontend

- Dynamic Content Display: News, products, and services displayed dynamically based on backend updates.
- Filtering and Search: Enables users to filter and search for specific news, products, or services.
- Responsive Design: Ensures a seamless experience across various devices and screen sizes.

Backend Management System

- User Authentication: JWT-based user authentication for secure login.
- User Management: Admin can manage existing users, including creation, modification, and deletion.
- Content Management: Admin can add, edit, or remove news, products, and services.
- Real-time Updates: Automatic updates to the user-facing frontend when changes are made in the backend.

HIGH ACCURACY RECOMMENDATION SYSTEM

Objective

Engineered a cutting-edge recommendation system leveraging advanced algorithms to predict and recommend products to users based on intricate analysis of their previous purchase history.

Algorithmic Approach

- Implemented a hybrid recommendation model combining both User-based and Item-based collaborative filtering techniques.
- Employed advanced matrix factorisation techniques such as Singular Value Decomposition (SVD).
- Implemented a dynamic feedback loop, continuously adapting the recommendation model through reinforcement learning.
- Applied comprehensive evaluation metrics, including precision, recall, and F1-score.