SEAN KUO SHANG-EN BAILEY

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SUMMARY

Experienced software developer with 3+ years of experience seeking a backend and full-stack development role. Proven in enhancing customer satisfaction and driving business growth. Committed to continuous learning and delivering efficient solutions.

TECHNICAL SKILLS & FEATURES

Languages: C, C++, Python, Scala, Java, SQL, JavaScript, TTCN, HTML
Tools & Frameworks: Linux, git, docker, RESTful, Distributed Systems, Parallel computing, Functional Programming

EXPERIENCE

Software Engineer @ **Novo Labs Inc**   Dallas, TX; **Feb 2021 – Jun 2023**
  • Contributed to the development of an automated voice-based service for restaurant orders, enhancing efficiency and customer satisfaction.
  • Built RESTful audio stream client for Microsoft Speech Recognition Service integration, improving accuracy and cost efficiency.
  • Developed RESTful Text Service channel for SMS communication, generating new business opportunities.
  • Implemented a load balancer function for the voice synthesis service client, ensuring optimal performance and scalability.
  • Revamped exception handling mechanisms, ensuring system robustness and stability.
  • Enhanced regex-based improvements to the address parsing, optimizing data quality and enabling accurate information retrieval.
  • Managed Kubernetes cronjobs for CI/CD processes.

Software Engineer & CS Lecturer @ **CodePro Education & Universities**   Taichung, Taiwan; **Dec 2019 – Dec 2020**
  • Developed an Online Judging system using Docker on Microsoft Azure cloud service, providing students with a platform to practice programming.
  • Automated the start and kill process of Docker containers through the creation of Linux shell scripts, simplifying operations and enhancing efficiency.

Backend Engineer (Research Assistant) @ **Free5gc Team of NCTU**   Hsinchu, Taiwan; **Jul 2019 – Nov 2019**
  • Engineered TTCN-3 verification system to validate JSON message formats in our 5G core network, ensuring compliance with 3GPP standards.
  • Utilized Wireshark to verify TTCN and 5G core network functionality over HTTPS with RESTful SBI API.
  • Identified long-standing design flaws in the AMF network function, resulting in non-responsive behavior to HTTPS messages without JSON application content.
  • Refactored 1000+ lines of code and 30+ messages from old EPC functions to NSMF and UPF network functions in the 5G core network.
  • Developed Linux shell scripts for simplified git usage, re-compilation, execution of the 5G core network, and message transmission to the verification system, reducing testing time by over 10%.

Embedded System engineer (Research Assistant) @ **MOTC TW & NCTU**   Taipei, Taiwan; **Jun 2016 – Sep 2016**
  • Developed and implemented an Arduino-based embedding system, optimizing code for efficient execution and accurate data reading from RS232 in 50 taxi meter systems.
  • Created a data retrieval system using VBA, incorporating a filtering function to eliminate missing data. Collected and processed over 1000 taxi data entries, each containing 10,000 GPS data points.

EDUCATION

B.S., Computer Science and Engineering   Hsinchu, Taiwan; **Jun 2018**
National Chiao Tung University (NCTU)
Relevant coursework: OOP, Data Structures, Algorithms, Database, Compiler Design, Computer Graphics, Artificial Intelligence, Operating System Design, Distributed system, Android Programming