SEAN KUO SHANG-EN BAILEY

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SUMMARY

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

EDUCATION

B.S.E., 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

TECHNICAL SKILLS & FEATURES

Languages: C, C++, Python, Scala, Java, SQL, JavaScript, TTCN, HTML
Tools & Frameworks: Linux, git, docker, RESTful, SQL, Distributed Systems, Parallel computing, Functional Programming, Flask, Arduino,
Work Authorization: Lawful Permanent Resident of the U.S./Green Card holder

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 load balancer function and enhanced address parsing for optimized system performance.
- Revamped exception handling mechanisms, ensuring system robustness and stability.
- Implemented regex-based address parsing function, optimizing accuracy and reliability.
- 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.
- Achieved top 20% student rankings in the pre-College programming test (APCS) by delivering effective instruction and guidance. Taught students about robot development with Arduino, Tinker Cad, and Micro Bit.

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; *May 2018 – Aug 2018*

- Developed and implemented an Arduino-based embedding system to receive and convert raw binary data from taxi meters, resulting in the production of 50 systems.
- Optimized Arduino code to minimize execution time and ensure accurate data reading from RS232.
- 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.