SEAN KUO SHANG-EN BAILEY

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SUMMARY

Mid leveled software engineer with 3+ years of experience in software development. Seeking full-time position of backend/full-stack jobs.

EDUCATION

B.S.E. Computer Science and Engineering   Graduating June 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 Parallel computing Distributed Systems Functional Programming Flask google script Arduino Redis

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**

- Built an Online Judging system with Docker on Microsoft Azure cloud service for students to practice programming.
- Programmed several shell scripts in Linux to simplify and automate the process of start and kill docker.
- Taught students to take the pre-College programming ability test (APCS) in Taiwan, all exam-attended students rank the top in 20 percent grades among all the examinees.
- Taught 8 students to build Robotic arms projects with Arduino. (Aug. 2018 @ ChienKuo Tech University)
- Taught 20+ international students to use tinker cad & Micro Bit. (Aug. 2019 @ Formosa Tech University)

Backend Engineer (Research Assistant) @ **Free5gc Team of NCTU**   Hsinchu Taiwan; **Jul 2019 – Nov 2019**

- Engineered verification system with TTCN-3 a C-like language to send receive messages from our 5G core network and verify if the format of messages (JSON) matches the 3gpp's newest standard.
- Operated Wireshark to verify the TTCN and 5G core network over HTTPS with RESTful SBI API.
- Discovered Major malfunctioned designs of the AMF network function that did not react with HTTPS message without JSON application content has existed for months before.
- Refactored about 1000+ lines of codes 30+ messages from old EPC functions of precedent 4G LTE core networ to NSMF and UPF network functions of 5g core network.
- Programmed several Linux shell scripts to simplify the process of git usage, re-make, executing the 5g core network, and sending messages to my verification system. Saved 10%+ time of the testing process.

Embedded System engineer (Research Assistant) @ **MOTC & NCTU**   Taipei Taiwan; **May 2018 – Aug 2018**

- Built an embedding system with Arduino to receive raw binary data from taxi meters through RS232, and convert raw data into CSV text, based on the final version, 50 systems have been manufactured.

- Improved Arduino code to minimize executing time to avoid missing while reading data through RS232.
- Developed a data retrieving system with VBA, with a filtering function to prune off missing data, 1000+ Taxi data have been collected, 10,000 entries of GPS data per Taxi.