

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

Python, C, Scala, Java, RESTful, SQL, Parallel computing, Distributed Systems, 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 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 network 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 Systems engineer (Research Assistant) @ **Bluh**

BluhCity, BluhState; **May 2018 – Aug 2018**

- Project 1
- Project 2

ACADEMIC PROJECTS

Hand Cycle for Polio Victims

Fall 2019 – Spring 2020

Collaborated in a team of three to design model of custom hand cycle for polio victims (SOLIDWORKS).

- Developed team schedule, including quality measurement for each major milestone (Microsoft Project)
- Ensured team compliance to Design Control Procedures according to Code of Federal Regulations (CFR)
- Recognized by faculty audience as “Best Presentation” out of 15 teams

Sensor for Quadriplegic Patients

Spring 2019

Led team of three to design and develop a mouse-like device to allow quadriplegic patients to use websites.

- Assessed range-of-motion data to determine feasible solutions (Python)
- Created device to detect muscle flexion in neck to control the mouse click (Arduino, FPGA)