

# Sebastian Qu

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La Jolla, CA | Willing to Relocate

## SKILLS

**Programming Languages & Databases:** Java, Python, C/C++, JavaScript, Ruby, Perl, Golang, MySQL, Redis.

**Frameworks & Tools:** SpringBoot, Vue.js, Linux, Git, AWS, Jira, Confluence, Nginx, Jenkins, Docker, Selenium.

## PROFESSIONAL EXPERIENCE

**Tesla** • Shanghai, China

**Jul 2023 – Jan 2024**

*Intern Software QA Engineer*

- Developed an ASR (Automatic Speech Recognition) latency detector with Python, improving batch data processing speed by 67.7% and measurement accuracy by 23.5%, enabling more reliable performance evaluations.
- Redesigned the Jenkins Pipeline - Trip Planner Pipeline (TPP) for the Chinese market, incorporating junction view and other functionalities not present in North American versions.
- Developed tools for analyzing Splunk logs and Auto-Test Pipeline results on Tesla vehicles, streamlining monitoring and evaluation processes and accelerating pre-release regression testing by 20%.
- Created the VoiceRecNLU Pipeline with Groovy and Java in Jenkins to automatically evaluate the accuracy of the NLU module in newly built firmware, saving at least 60 minutes of validation time per firmware version.
- Established Tesla's Node Farm using Raspberry Pi and Linux to control and monitor vehicle PCs, deploying eight parallel nodes and reducing regression test suite and pipeline run time by 63.3% at Tesla Shanghai.

**ASML** • Wuhan, China

**Jan 2023 – Jun 2023**

*Intern Software Development Engineer in Test*

- Created a Code Coverage Analysis Tool with Python and GCC to assess automated test coverage per build, leading to a 37% increase in coverage and significantly enhancing accuracy and comprehensiveness.
- Designed Auto Packager & Auto Cleaner to optimize server performance by clearing expired jobs and packaging low-priority tasks, reducing average server load by 12%.
- Developed the Auto Verify & Auto Run Toolkit to automate daily job execution and Jira ticket verification, running unresolved tickets and checking for bug fixes after each nightly build, saving 45 minutes per ticket.
- Built toolkits for Bamboo and Qtest with Python to automate test plan execution and issue tracking, saving over 5 hours per version iteration.

## SELECTED PROJECTS

**Engineering construction project management system (B/S Web Application), HUST**  

**Dec 2023 – May 2024**

- Completed the full-stack development of this undergraduate capstone project system independently.
- Utilized Spring Boot 3 framework and Java for backend development, and Vue 3 framework and JavaScript for frontend development.
- Managed data using MySQL for relational storage, Redis for caching, and MyBatis for ORM.

**HUSTwiki, Huazhong University of Science and Technology**

**Jul 2022 – Nov 2022**

- Led the development of HUSTwiki, a campus forum for HUST, deployed on the WeChat mini-program platform.
- Managed backend services and project data primarily using Java.
- Implemented cloud server cluster operations, developed and deployed remote applications, and optimized Redis database functionalities.

**NUS Summer Workshop – Data Security, National University of Singapore**  

**Apr 2022 – Aug 2022**

- Conducted research on network attack and defense, collaborating with peers to write a thesis and complete the project.
- Developed a user-friendly graphical interface (GUI) tool in Python for verifying programs, addressing buffer overflow vulnerabilities in languages like C and Java.

**Tencent mobile device client development project, Tencent**  

**Jan 2022 – Aug 2022**

- Contributed to a collaborative mobile device client development initiative jointly sponsored by Tencent and HUST.
- Spearheaded the development of the 'NetNews' Android news browser client independently.

## EDUCATION

**University of California, San Diego(UCSD), La Jolla, USA**

**Sep 2024 - May 2026**

Master of Science in Computer Science

**Huazhong University of Science and Technology(HUST), Wuhan, China**

**Sep 2020 – Jul 2024**

Bachelor of Engineering in Computer Science

**Average GPA: 3.93/4.0**