

# QIU Yilun

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Career Directions: Software Engineer, R&D Engineer, Full Stack Developer, and Back End Developer

## Educational Background

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**National University of Singapore (NUS)** Aug 2024 - ongoing

*Master of Computing - Computer Science Specialisation*

- Core courses: Distributed Systems, Advanced Computer Networks, Database Security, etc.

**Southern University of Science and Technology (SUSTech)** Sep 2020 - Jul 2024

*Bachelor of Engineering - Computer Science and Technology*

- GPA: 3.74/4.0 (90.02/100)
- Core courses: Computer System Design and Application, Data Structures and Algorithm Design, Principles of Database Systems, Object-oriented Analysis and Design, Software Engineering, Operation Systems, etc.

## Work/Project Experience

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**R&D Engineer (Intern) at Roumai Medical Co., Ltd.** Dec 2023 - Jun 2024

EMG Signal Capture Station (Android) | Tech Stack: Kotlin+Compose+Ktor+Unity+C#+Python

- Implemented the Android app UI using Kotlin Compose framework.
- Retrieved data from the wristband via BLE protocol and used coroutines to efficiently process raw data, improving performance and concurrency without blocking the main thread for UI rendering.
- Built a 3D robotic arm model in Unity with C# and exported it as WebGL. Set up a lightweight server using Ktor on the Android app to run the WebGL service in the background and rendered it via WebView. The Android app communicated with Python server via UDP and used WebSockets to control the robotic arm's movements through the WebGL service.

The application has been deployed by the company to demonstrate the features of the wristband and the effectiveness of the robotic arm control algorithm based on captured EMG signals.

**Development Engineer (Intern) at Nankerixin Technology Co., Ltd.** Feb 2023 - Jun 2023

Taskmate Grading Application (Desktop) | Tech Stack: Rust+Tauri+Vue3+TypeScript | [\[GitHub\]](#)

- Implemented a school system authentication process in Rust by automatically opening the browser and registering a custom URL protocol for callback, ensuring accurate identification and privacy security.
- Utilized TypeScript async features to invoke Tauri commands, enabling efficient and concurrent downloading and decompressing of assignment files, enhancing processing efficiency.
- Built an assignment scoring page with Vue 3, incorporating components to preview various file types (Markdown, PDF, text, etc.) and using Element Plus to construct the file directory tree.
- Configured CI/CD with GitHub Actions and used the VuePress framework to build project documents.

The application was used in the Algorithm Analysis and Design course at SUSTech, which served over 200 teachers, teaching assistants, and students and it received positive feedback.

**Object-oriented Analysis and Design Course Project** Sep 2022 - Dec 2022

Annear Hotel Management System (Web) | Tech Stack: Java+SpringBoot2+SpringCloud+Vue2 | [\[GitHub\]](#)

- Responsible for the design of back-end MySQL database, utilizing Nacos for registry and configuration, OpenFeign for microservice communication, and configuring gateways to resolve cross-domain issues.
- Used Redis and Lua scripts to prevent duplicate submission attacks, addressing issues with users submitting orders multiple times due to browser refreshes or back navigation.
- Utilized RabbitMQ message queues to send order status update notifications.
- Visualized hotel revenue data using EChart in the front-end for administrators.

As the project leader, I led the team of 5 to complete the project, earning full marks, one of only 5 out of 25 groups

## Campus Experience

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iMED Lab, SUSTech

Sep 2022 - Jun 2024

*Research Assistant*

- Participated in research on retinal image vessel segmentation tasks.
- Completed the paper titled "Semi-ECNet: Edge-Consistency Based Semi-Supervised Retinal Vessel Segmentation Network" as the first author, which was accepted by ISBI 2024 (21st IEEE International Symposium on Biomedical Imaging). [[Link](#)]

Department of Computer Science and Engineering, SUSTech

Feb 2022 - Jan 2024

*Teaching Assistant*

- Served for courses "Introduction to Computer Programming", "Data Structures and Algorithm Analysis", "Computer System Design and Applications", and "Principles of Database Systems".
- Twice recognized as an Outstanding Student Teaching Assistant, managing over 200 students in total.

## Professional Skills

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- **Basics:** Data Structures and Algorithms, Operating Systems, Computer Organization, Computer Networks, Object-oriented Programming, Deep Learning
- **Languages:** Python, Java, Kotlin, Go, C, C++, Rust
- **Frameworks:** SpringBoot, SpringCloud, Flask, Compose, Tauri, PyTorch
- **Frontend:** HTML, CSS, JavaScript, TypeScript, React, Vue
- **DBMS:** MySQL, PostgreSQL, SQLite, Oracle, openGauss
- **Middlewares:** Redis, RabbitMQ, Elasticsearch
- **Toolchain:** Linux, Git, Docker, Sphinx Documentation, GitHub CI/CD
- **Tools:** VSCode, Typora, Overleaf, WPS Office
- **Soft Skills:** Teamwork, Time Management, Documentation, Presentation

## Prizes & Honors

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National Bronze Award, Kunpeng Application Innovation Contest – openGauss

Oct 2022

Honorable Mention, Mathematical Contest in Modeling (MCM)

May 2023 & May 2022

Second Class, Merit Student Scholarship of SUSTech

Nov 2022

Third Class, Merit Student Scholarship of SUSTech

Nov 2023 & Nov 2021