Haoheng Huang

EDUCATION

Shenzhen University Shenzhen, China

B.S. in Software Engineering, *Sept. 2021 – July. 2025*

- Relevant Coursework: Fundamentals of Programming, Object-Oriented Programming, Database Systems, Data Structures, Design and Analysis of Algorithms, Computer Networks, Operating Systems, Software Engineering, Introduction to Artificial Intelligence, Introduction to Computer Security, Software Architecture and Design Patterns

RESEARCH EXPERIENCE

National Engineering Laboratory for Big Data System Computing Technology

Facial Recognition Technology Based on Huawei Ascend *Feb. 2023 – May. 2025*

- Led the development of a facial motion capture system by integrating an external camera with the Huawei Ascend Atlas200IDK board using Python.
- Optimized the motion capture model to improve accuracy and real-time processing capabilities.
- Developed a mobile application to integrate facial motion capture technology, enabling interactive functionality between facial expressions and mobile devices.

PROJECTS

Code Vulnerability Detection System (Undergraduate FYP) Shenzhen, China

Project Lead *Feb. 2024 – May. 2025*

- Designed and implemented a code vulnerability detection system based on large language models, focusing on semantic analysis and security vulnerability identification.
- Developed backend using Java Spring and integrated a PyCharm plugin for automated code submission, model inference, and feedback.
- Explored and compared pretrained code models (e.g., CodeBERT, CodeGeex) and fine-tuned them for vulnerability detection tasks.

Vision-based OS Interaction via Hand Gesture Tracking

Independent Project *Present*

- Implemented a real-time hand gesture tracking system using Python, OpenCV, MediaPipe, and PyAutoGUI for mouse control.
- Enabled cursor movement, click, and double-click events via gesture recognition, integrating vision-based control directly with the operating system.
- Optimized smoothing, velocity mapping, and posture gating to improve robustness and real-time responsiveness.

INTERNSHIP EXPERIENCE

Shenzhen Materials Transport and Trade Co., Ltd. Shenzhen, China

Data Management Intern *Jul. 2022 – Sept. 2022*

- Operated the company's database system at the application layer, conducting data analysis and generating daily business reports to support decision-making across departments.
- Contributed to the testing of the database system by identifying and resolving system bugs, ensuring alignment between database functions and business requirements.
- Assisted in requirements analysis, data migration, and data cleaning to facilitate a seamless and secure transition to the new database system. Participated in testing the new system, validating its performance and functionality for successful deployment.

GALA Sports Wangchen Technology Shenzhen, China

Unity3D Front-End Development Intern *Jul. 2023 – Sept. 2023*

- Participated in the development, iteration, and maintenance of sports games using Unity3D and C#, contributing to four game iterations and more than ten hotfixes.
- Collaborated with the art design department, utilizing Stable Diffusion for LoRA training to generate AI-based art models. Delivered custom designs, including icons and character models, tailored to the unique artistic styles required by several game departments.

Honors and Awards

- S Prize - American College Student Mathematical Contest in Modeling, Mar. 2022
- Provincial Second Prize - Blue Bridge Cup C/C++ Software Category, Apr. 2023
- Gold Medal - 9th Internet+ University Student Innovation and Entrepreneurship Competition, Guangdong Provincial Finals, May 2023
- Silver Medal - Ascend AI Innovation Competition, Guangzhou Regional Finals, Developer Kit Innovation Track, May 2023
- Bronze Medal - Ascend AI Innovation Competition, National Finals, Developer Kit Innovation Track, May 2023
- Gold Medal - 10th "Challenge Cup" China Youth Innovation and Entrepreneurship Competition (Innovation Group), Nov. 2023
- Innovation and Challenge Team Award - Tencent Teaching and Learning Scholarship, 2023

Skills Summary

Programming Languages: Python, C++, Java, SQL, LaTeX

Frameworks & Tools: Spring, Node.js, JUnit, Git, Linux, IntelliJ, VS Code

AI/ML & CV: OpenCV, MediaPipe, PyTorch, Stable Diffusion, Tableau

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