

HUANG HAOYU

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Education

The University of Tokyo

Apr 2024 - Mar 2026

Master of Arts & Sciences, Graduate School of Interdisciplinary Information Studies

Tokyo

- Supervised by Prof. Yoichi Sato.
- Proposed research field: Computer vision, Human-computer interaction

The University of Hong Kong

Sep 2019 - Jun 2023

Bachelor of Engineering in Computer Science, First Class Honours

Hong Kong

- cGPA 3.89 out of 4.30
- Dean's Honors List, Faculty of Engineering, 2019 - 2023 4 years consecutive
- Dean's Fund for Research Path Exploration 2022

Experience

PKSHA Technology

Sep 2024

Software Engineer Intern

Tokyo

- Engaged in the development of large language model based chatbot system.
- Mainly worked on development/deployment on backend and LLM prompt engineering for retrieval based generation (RAG).
- Technical stack: Python(FastAPI), AWS, Terraform.

The University of Hong Kong

Jun 2022 - Apr 2023

Research Assistant, HKU AIoT Lab, Department of Computer Science

Hong Kong

- Supervised by Dr. Wu Chenshu.
- Conducted research in developing gesture interaction system based on deep learning and computer vision.
- Constructed custom dataset and designed gesture perception network using PyTorch.
- Designed and conducted user studies on volunteers for evaluating the system.

TechX Academy

Apr 2021 - Jul 2021

Head Teaching Assistant Intern (Game Design and Development), Academic Team

Chengdu

- Coordinating other TAs and performing education task in the technology summer camp held by the company.
- Assisted in teaching plan making, preview course preparation, tutorials about game design theories and Unity development, and aided students in finishing their capstone hackathon.

The University of Hong Kong

Sep 2020

Student Intern, IMSE Department

Hong Kong

- Testing and operating data annotation tool based on Unity Engine for an M.Phil project which focus on calibrating photos of everyday object with virtual 3D model.

Talks

Young Scholar Tech Talk - HOF2

May 2023

- First undergraduate presenter group in HKU TechTalk series for Ph.D.s.
<https://innowings.engg.hku.hk/hand-over-face-gesture/>
- Presents Two-Finger Hand-Over-Face (HOF2), a natural and robust novel input modality that is based on computer vision and enables interaction with facial region hand gestures.

Projects

min-server

Jun 2024 - Present

- Open-source educational project focusing on providing minimal Python implementation optimized for learning on common server-side functionalities (HTTP, WebSocket etc.)
- <https://github.com/louishhy/min-server>

MagTrace@HKU: Localization via Ambient Magnetic Signal

Mar 2023 - May 2023

- Self-conducting project that focus on ambient magnetic field fingerprinting and matching using mobile phones.
- Performed field study across the campus to collect raw magnetic field reading, inspected useful feature extraction and feature matching methods for localization by leveraging signal processing and machine learning using Python.

Eat@HKU: Canteen Congestion Reporting App | Backend Development (Database & API)

Sep 2022 - Dec 2022

- Android app prototype for providing crowd-sourced university canteen congestion information report/retrieval, menu information and commenting functionality.
- Developed backend API and database using Express.js and MongoDB.

Game: *Supermarket Jump!* | Project Leader & Unity Development (UI/Animation)

Mar 2021 - May 2021

- Coordinated the team to develop a leisure jumping minigame based on Unity & Blender.
- Accepted and exhibited in HKU InnoShow 2021. https://innoacademy.engg.hku.hk/supermarket_jump/
- Responsible for UI, animation and game trailer design.

Game Video: *Pharaoh's Reincarnation* | Project Leader & Unity Development

Aug 2020

- Coordinated the team to make a game video on the topic of culture for the coursework of HKU Commoncore, based on Unity, SketchUp and Twinmotion.
- Responsible for Unity development and logic implementation.

Skills

Programming languages: Python, C/C++, Java, Javascript, C#

Frameworks and tools: Docker, PyTorch, Unity

Cloud Services: AWS

Language: *Native:* Chinese(Mandarin), *Fluent:* English (TOEFL 115/120), *Basics:* Japanese (JLPT N1 134/180, N2 161/180)

Computer Science: Machine learning / Deep learning, Computer vision, Natural language processing