

Jiayu Li

✉ jiayu320.li@connect.polyu.hk <https://jiayu320.github.io/>

Education

Hong Kong Polytechnic University

Sept 2024 – Present

MS in Information Technology

- GPA: 3.6
- **Coursework:** Machine Learning and Data Analysis, Computer Vision and Image Processing, Natural Language Processing
- **Thesis:** Research on Privacy Preserving Collaborative AI (On going) [Proposal](#) [🔗](#)

Hefei University of Technology

Sept 2020 – June 2024

BS in Mathematics and Applied Mathematics

- GPA: 86.39
- **Coursework:** Analytic Geometry, Discrete Mathematics, Numerical Analysis, Programming in C++, Programming in C
- **Thesis:** [Research on Audio-Driven Head Motion Video Generation](#) [🔗](#)

Internships

Product Manager

Anhui, China

iFLYTEK CO.LTD.

Dec 2023 – Feb 2024

- Collected and analyzed primary data through a series of experiments, resulting in new insights that informed the development of a new product
- Followed up with the data analysis of products, conducted competitive product analysis, and collected user feedback
- Learned about search engine natural language and natural language generation-related algorithms

Front-end Developer Intern

Jiangsu, China

ZHENJIANG iSoftStone iGeek Home Information Technology Co., Ltd.

May 2023

- Developed a full stack web application from scratch, including back-end services, front-end interface, and database

Publications

Facial Key Point Offset Based Framework for Micro-Expression Recognition

2023

Mingzhong Wang, Qingshan Wang, Qi Wang, Zhiwen Zheng, **Jiayu Li**, Yuting Wang, Xinyang Ma, Yinjie Lu

19th Joint Academic Conference on Harmonious Human-Machine Environment (HHME2023)

Invention Patent

A command-controlled 3D facial animation generation method based on a single face image.

2024

Yan Xing, **Jiayu Li**, Peilin Hong, Shuangguan Liu, Min Hu, Daolun Li, Li Zhang, Jieqing Tan, e.CN. Patent application 202410912502.5 filed in July 2024. Patent Pending.

Research Experience

Research on Privacy preserving collaborative AI

Jan 2025 – Present

Advisor: Prof. Wanyu Lin

- To build a collaborative framework for LLMs that can produce more faithful responses and corresponding

confidence for reference, thereby enhancing the trustworthiness of LLMs. The core idea is to leverage the collaboration model and best use the strong points and different decision-making behaviors of different LLMs or expert LMs to compensate for the biases of a single LLM.

Research on Audio-Driven Head Video Synthesis

Dec 2023 – Jun 2024
Advisor: Prof. Yan Xing

- Spearheaded a groundbreaking project in audio-driven head video generation, with a focus on voice command recognition, monocular 3D facial reconstruction, and notably, the innovative generation of expression. Employed CNNs and GMM-HMM for voice command recognition, advanced 3D facial reconstruction through 2D landmarks, and pioneered GAN-like method to control expression subtleties at the facial action unit level, a first in the field.
- Won Outstanding Undergraduate Thesis at the school level (Top 2% students in Department of Mathematics)

College Students Innovation and Entrepreneurship Training Program

Dec 2021 – Apr 2023

A Facial Key Point Offset Based Framework for Micro-Expression Recognition

Advisor:

Provincial level

Prof. Qingshan Wang

- Preprocessed the micro-expression dataset, including the division of fixed points on human faces; amplified micro-expression by means of the Euler subtle motion amplification algorithm; completed application by using the latest Dataset CAS (ME)3 released by the Institute of Psychology, Chinese Academy of Sciences; Constructed long-term sparse deep flow algorithm by using depth information, which could be applied to identify micro-expression
- Won excellent approval of College Students Innovation and Entrepreneurship Training Program at the provincial level (Top 2 of projects in Department of Mathematics)

Honors and Awards

Outstanding Undergraduate Thesis Award

Jun 2024

Top 2% students in Department of Mathematics, Hefei University of Technology

Outstanding Student Scholarship

Dec 2023

Top 10% students in Department of Mathematics, Hefei University of Technology

Outstanding Student Scholarship for Excellence in Scientific & Technological Activities

Dec 2023

Top 2% students in Department of Mathematics, Hefei University of Technology

Silver Award of the 8th Anhui Province “Internet Plus” Innovation and Entrepreneurship Competition

Nov 2022

Department of Education of Anhui Province

Gold Award of the 8th Hefei University of Technology “Internet Plus” Innovation and Entrepreneurship Competition

July 2022

Hefei University of Technology

Outstanding Student Scholarship

Dec 2021

Top 10% students in Department of Mathematics, Hefei University of Technology

Merit Student

Dec 2021

Top 2% students in Department of Mathematics, Hefei University of Technology

Outstanding Young Volunteer

Dec 2021

Hefei University of Technology

Outstanding Volunteer

Oct 2021

The Yangtze Crossing Campaign Memorial

Technical Skills

Languages: Python, SQL (Oracle & SQL Server), Latex, JavaScript, HTML/CSS, C/C++, MATLAB, R

Developer Tools: VS Code, PyCharm, Git, Linux, IntelliJ IDEA

Libraries/Frameworks: PyTorch, TensorFlow, OpenCV, NumPy, Pandas, Vue.js

Languages

Mandarin

Certificate of Putonghua Test, Band 2, Level 1, State Language Work Committee

Native speaker

English

IELTS: 6.5

Highly proficient

Extra-curricular Activities

Volunteer Activities

Sep 2020 — Jun 2024

- Campus anti-epidemic volunteer
Responsible for delivering food, drinking water, and daily necessities for students.
- Volunteer teacher
Provided teaching at Hefei Shushan Primary School and in communities in Binhu New Area
- Volunteer service in Anhui Provincial Library
Shelved children's books; Provided children storytelling picture book lessons to expand their imagination.
- The Yangtze Crossing Campaign Memorial service volunteer

Minister of National Folk Art Association

Hefei University of Technology

Sep 2021 — Jun 2022

Head of the publicity department of Zhaoyang Volunteer Service Association, Student Union

Department of Mathematics, Hefei University of Technology

Sep 2021 — Jun 2022

Member of Hefei University of Technology Chinese orchestra

The principal first Erhu player, Hefei University of Technology

Sep 2021 — Jun 2024