Jiayu Li

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PROFILE

A dynamic IT master's student with a Bachelor's degree in Mathematics, bringing a unique blend of analytical skills and innovative thinking. Recognized for transforming research into a patented invention, expertise spans machine learning and computer vision, underpinned by a solid grasp of deep learning techniques. Currently engaged in artificial intelligence research, focusing on privacy to develop groundbreaking solutions that address pivotal challenges in the industry. Committed to leveraging technical skills and creativity to drive advancements in technology.

EDUCATION

Sep 2020 — Jun 2024

Bachelor of Science (School of Mathematics), Hefei University of Technology
Anhui, China

Major: Mathematics and Applied Mathematics

Cumulative Average Score: 86.39/100

Sep 2024 — Present

Master of Science in Information Technology, Hong Kong Polytechnic University
Hong Kong

Current GPA: 3.6/4.3

INTERNSHIPS

Dec 2023 — Feb 2024

Intern of Product Manager, iFLYTEK CO.LTD.
Hefei, China

- 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

Aug 2023 — Sep 2023

Fund Intern, China-Belgium Direct Equity Investment Fund
Beijing, China

- Assisted the manager in investigating fund investment cases, searched for funds to be withdrawn
- Organized previous investment materials of the firm
- Collected relevant information on the fund industry

May 2023 — May 2023

Front-end Developer Intern, ZHENJIANG iSoftStone iGeek Home Information Technology Co., Ltd.
Jiangsu, China

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

Jul 2022 — Aug 2022

Tianjin, China, IE-Cheng Technology (Tianjin) Co., Ltd.
Tianjin, China

- Gathered and cleaned data from log files of the Hydrography Measure System
- Analyzed the capacity, velocity, and tendency of the flow
- Assisted the firm in completing the calculation algorithm to predict the future trend of flow

RESEARCH EXPERIENCE

Jan 2025 — Present

Dissertation

Research on Privacy preserving collaborative AI (Advisor: <u>Asst. Prof. Lin Wanyu</u>)

Dec 2023 — Jun 2024

Graduation project and thesis

Research on Audio-Driven Head Video Synthesis(Advisor: <u>Assoc. Prof. Xing Yan</u>)

- 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

Dec 2021 — Apr 2023

College Students Innovation and Entrepreneurship Training Program

A Facial Key Point Offset Based Framework for Micro-Expression Recognition (provincial level) Group Project-Team Member (Advisor: Prof. <u>Wang Qingshan</u>)

- 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

PUBLICATIONS

Mingzhong Wang, Qingshan Wang*, Qi Wang, Zhiwen Zheng, **Jiayu Li**, Yuting Wang, Xinyang Ma, Yinjie Lu. 2023. A Facial Key Point Offset Based Framework for Micro-Expression Recognition. 19th Joint Academic Conference on Harmonious Human-Machine Environment (HHME2023)

INVENTION PATENT

Yan Xing, **Jiayu Li**, Peilin Hong, Shuangguan Liu, Min Hu, Daolun Li, Li Zhang, Jieqing Tan.2024. A command-controlled 3D facial animation generation method based on a single face image.CN. Patent Application 202410912502.5 filed July 2024. Patent Pending.

HONORS AND AWARDS

Jun 2024

Outstanding Undergraduate Thesis Award, Hefei University of Technology

Dec 2023

Outstanding Student Scholarship, Hefei University of Technology

Dec 2023

Outstanding Student Scholarship for Excellence in Scientific & Technological Activities, Hefei University of Technology

Dec 2021

Outstanding Student Scholarship, Hefei University of Technology

Dec 2021

Merit Student, Hefei University of Technology

CERTIFICATES

Jul 2022

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

May 2022

National Computer Rank Examination-Level 2, C Language Programming Design

TECHNICAL SKILLS

Languages

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

Developer Tools

VS Code, PyCharm, Git, Linux, IntelliJ IDEA

Libraries/Frameworks

PyTorch, TensorFlow, OpenCV, NumPy, Pandas, Vue.js

EXTRA-CURRICULAR ACTIVITIES

Sep 2020 — Jun 2024   **Volunteer Activities**

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

The Yangtze Crossing Campaign Memorial service volunteer

Sep 2021 — Jun 2022   **Minister of National Folk Art Association, HFUT**

Sep 2021 — Jun 2022   **Head of the publicity department of Zhaoyang Volunteer Service Association, Student Union**

Sep 2021 — Jun 2024   **Member of College Students Art Troupe**

LANGUAGES

Mandarin   Native speaker   **English**   Highly proficient

HOBBIES

Photography and Erhu (9th-Level)