JIAMIN LOU

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EDUCATION

Shenzhen university **Shenzhen, China**

Master's degree, Modern technology for education Sept. 2021 – June 2024

GPA: 3.61/4

Achieved a full GPA of 4.0 across 5 core courses related to educational technology.

Zhejiang Gongshang university **Hangzhou, China**

Bachelor's degree, Computer science and technology Sept. 2017 – June 2021

GPA: 3.39/5, which is equivalent to 83.85/100

Achieved scores of 90+/100 in 14 diverse courses in computer science, exhibiting particular expertise in system/game development, mathematical modeling, data visualization, and conducting professional experiments.

PROJECTS

Project A: Optimized formative assessment through AI-driven methods with note-tracking smart pens in middle school Sept.2022 – Mar.2024

- Conducted data collection via note-tracking smart pens and LMS
- Trained formative assessment model using ML techniques to provide personalized feedback
- Executed important feature analysis through ANOVA and the post hoc test to determine key factors affecting student performance
- Developed visualizations of formative assessment chart , enhancing educators' decision-making

Project B: Developed a junior high school academic performance prediction system Sept.2022 – Mar.2024

- Led data collection efforts and trained predictive models utilizing ML techniques to identify at-risk students
- Built an AI-powered performance prediction system, presenting risk analysis reports and multilayer performance visualizations to assist educators in intervention strategies

Project C: Served as team leader in the creation of an intelligent sign language learning platform Nov.2018 - Dec.2020

- Oversaw the development of data-driven 3D animation sign language courses in Unity, providing an interactive and engaging learning experience
- Designed and implemented AI-driven assessment modules using hand pose tracking based on OpenPose, enabling real-time feedback for learners

Project D: Developed Annotation Standards and Contributed to the RAER Dataset for Academic Emotion Recognition Sept.2023 - Dec.2024

- Designed two sets of annotation standards for academic emotion recognition based on educational psychology and facial expression analysis
- Contributed to the creation of the RAER dataset, which captures students' academic emotions in diverse real-world learning environments

PUBLICATIONS AND DISSERTATIONS

Jiamin Lou & Xiaoming Cao (2024). Investigating AI-driven formative assessment with note-tracking smart pens - An exploratory study in middle school (**Project A**)
Status: Under review by *Technology, Knowledge and Learning* (EI & ESCI, IF=3.0)

Jiamin Lou, Zui Cheng, Shuning Li, & Yuanyuan Wang (2024). A systematic literature review on AI-driven gamification in K12: Insights, limitations, and future directions
Status: Under review by *Interactive Learning Environments* (SSCI Q1, IF=3.7)

Luming Zhao, Jingwen Xuan, **Jiamin Lou**, Yonghui Yu, Wenwu Yang (2025). A Novel Dataset and Benchmark for Real-World Academic Emotion Recognition (**Project D**)
Status: Under review by *The IEEE/CVF Conference on Computer Vision and Pattern Recognition* (CVPR 2025)

Master's thesis: Research on the development and application of junior high school academic performance prediction system based on accompanying classroom data (**Project B**)
Keywords: Academic performance prediction, secondary education, artificial intelligence, machine learning, precision teaching

EXPERIENCE

Fenghuangcheng Experimental School, Guangming District **Shenzhen, China**
Research Consultant Nov.2022 – Dec. 2023
Assisted the school in preparing application materials and report materials for the Ministry of Education's Information Technology Integration Reform Experimental School, ultimately securing a project investment of approximately 70,000 USD for the purchase of note-tracking smart pens and LMS.

Shenzhen Xuefu Middle School **Shenzhen, China**
Mathematics and Programming Teacher May 2022 – Dec.2022
Taught 7th and 8th grade students to solve mathematical problems using Python programming. Among these, the most popular lesson was using the Python-Turtle library to draw cubes, thereby helping students understand function writing in Python, and aid in solving spatial problems derived from two views.

Nanshan Foreign Language School, Kehua Campus **Shenzhen, China**
Programming Club Teacher Sept. 2021 – Dec.2021
Devised a comprehensive Python programming curriculum for 7th and 8th-grade students, comprising topics from variable definitions to the introduction of neural networks and convolutional neural networks.

AWARDS AND HONORS

Leadership in Project C - Obtained the **China Computer Software Copyright Registration** (1st out of 5 in contributions), Registration number: 2020SR0770295 July 2020

National-Level Innovative and Entrepreneurial Project for Students in 2019 (Project C) - Successfully completed the project (ranked 1st out of 5 in contributions) Dec.2020

Shanghai City Huichuang Youth "Internet +" Cultural Innovation Category - Secured the first prize (ranked 1st out of 9 in contributions) Aug.2020

Zhejiang Province "Internet +" Entrepreneurship Competition - Awarded the Silver prize (ranked 1st out of 9 in contributions) Aug.2020

Zhejiang Province Challenge Cup Entrepreneurship Competition - Granted the third prize (ranked 1st out of 7 in contributions) Aug.2020

China College Computer Competition - Network Technology Challenge, East China Region - Conferred the second prize (ranked 1st out of 6 in contributions) Aug.2020

Huichuang Youth Entrepreneurship Competition, International Track (Business Category) - Honored with the second prize (ranked 1st out of 9 in contributions) Nov.2020

Repeated Scholarship Recipient - Awarded three times with university-level scholarships throughout my undergraduate and postgraduate studies respectively 2018-2023

SKILLS

Machine Learning Model Training:
Skilled in in Python (NumPy, Pandas, Scikit-learn, Keras, TensorFlow)

System Development:
Proficient in front-end (HTML, CSS, JS), Database (MySQL), & back-end (Python-Flask)

Data Visualization:
Expertise in Python tools (Matplotlib, Seaborn) and D3.js

Statistical Analysis:
Skilled with SPSS statistical software