# **JIAMIN LOU**

Email: ljmuscy@gmail.com

#### **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:** Implemented optimization of 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, executed important feature analysis through ANOVA and the post hoc test, and developed visualizations of formative assessment chart.

**Project B:** Developed a junior high school academic performance prediction system

Sept.2022 – Mar.2024

Led data collection efforts, trained predictive models utilizing ML techniques, and built a prediction system that focuses on presenting lists of at-risk learners and visualizing learner performance on multilayer dimensions.

**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, and orchestrated AI-driven assessment modules using hand pose tracking based on OpenPose.

#### 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)

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 – July 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