

Yiyang Lu

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EDUCATION

Harbin Institute of Technology, Weihai

Sept. 2021 – Jun. 2025 (expected)

B.Eng. in Computer Science and Technology

Weihai, China

- **Weighted Average Score:** 92.19/100 (ranking the top 10%)
- **Core Courses:** Linear Algebra and Analytic Geometry (100%), Probability Theory and Mathematical Statistics (100%), Calculus A (99%), Computing Method (97%), High-level Language Programming I (96%)

AWARDS & SCHOLARSHIPS

- **People's Scholarship in China:** Received Second-class Scholarship twice (Jun. 2023 & Dec. 2022) and Third-class Scholarship twice (Dec. 2023 & Jun. 2022)
- **International Mathematical Contest in Modelling (MCM):** Meritorious Winner (May 2024)
- **China Undergraduate Mathematical Contest in Modelling:** Second-class Award in Shandong Province Division (Nov. 2023)
- **China Collegiate Computing Contest - Artificial Intelligence Innovation Contest (C4-AI):** Third-class Award in East China Division (Oct. 2023)
- **Chinese Mathematics Competitions:** First-class Award in Heilongjiang Province Division (Jan. 2023)

RESEARCH EXPERIENCE

Automatic Detection of Unidentified Flying Objects

Dec. 2023 – present

- Improved the loss function of the YOLO framework and applied various data augmentation techniques to process datasets, enhancing the robustness and accuracy of the automatic detection model.
- Produced an EI paper (accepted, yet to be published) as a co-first author.

Resilience Measurement and Prediction Model for Subway Systems under Rainfall Disturbances

Jul. 2023 – present

- Collaborated with the Heilongjiang Provincial Key Laboratory of Intelligent Traffic Management and Technology to develop a resilience measurement and prediction model for subway systems under rainfall disturbances.
- Responsible for implementing resilience prediction, contributing to the establishment of an integrated network framework combining wavelet packet decomposition and an improved GAT-TCN based on the voting method.
- Completed a SCI paper (IF=7.6, has received its first round of review comments) as the second author.

PROJECT EXPERIENCE

Weihai Tianxin Modern Service Technology Research Institute Co., Ltd.

Weihai, China

Laboratory Researcher

Sept. 2022 – present

- Participated in the development of personalized tutoring software for long-distance running in the Physical Education Exam for High School Entrance.
- Obtained real-time multi-angle motion video streams using DJI drones and applied MODNet and AlphaPose models to acquire 2D skeleton coordinates.
- Conducted motion analysis through the 3D reconstruction of human skeletons, proposing a “matrix tracking” strategy based on skeleton similarity to achieve skeleton matching.

Development of Mathematical Modelling Assistance Software

Weihai, China

Independent Researcher

Sept. 2022 – Feb. 2023

- Independently developed mathematical modelling assistance software inspired by SPSSPRO.
- Implemented a function to provide adaptive data analysis results based on inserted algorithms and the data uploaded by users, meeting basic algorithmic needs for mathematical modelling competitions and reducing participants' programming burden.

SKILLS

Programming Languages: C/C++, Java, Python, etc.

Languages: Native Mandarin speaker, fluent in English (IELTS: 7.0)