Peng Ruoxin

AI Application Development · Data Analysis · Algorithm Internship

Email: yiwu1777@gmail.com | GitHub: github.com/yiwu17 | Google Scholar: SluSJCYAAAAJ | CSDN: blog.csdn.net/m0_70098011
Target locations: Shenzhen / Chengdu | Seeking internship opportunities

Profile

Master student in Artificial Intelligence and Big Data Computing with a Data Science background. Project experience spans AI products, RAG systems, computer vision, data dashboards, and database systems. Focused on turning AI and data projects into usable, visual, and reproducible demos.

Education

The Hong Kong Polytechnic University — M.Sc. in Artificial Intelligence and Big Data Computing | Sep 2025 - Mar 2027

Current master student; focus areas include AI applications, retrieval-augmented generation, model evaluation, data computing, and visualization.

China Agricultural University — B.Sc. in Data Science and Big Data Technology | Sep 2021 - Jul 2025

GPA: 3.76/4.00; Rank: 5/29. Major courses: Artificial Intelligence, Machine Learning, Big Data Storage and Processing, Data Mining, Big Data Visualization.

Selected Projects

Xunmeng — AI Dream Journal Product | May 2026 - Present

- Built and deployed an AI product at dream.rxpeng.com using React, FastAPI, SQLite, and Capacitor.
- Implemented dream recording, AI story organization, interpretation follow-up, emotion/keyword statistics, comic storyboard generation, and Android APK packaging.
- Designed the product as a live web app plus mobile-style interaction demo for portfolio presentation.

Dual-Partition Two-Stage DeRy Architecture Reassembly Search | Dec 2025 - Present

- Decomposes pretrained CNN/ResNet, RegNet, ViT, and Swin blocks into model-zoo components with stage, group, Params, FLOPs, and feature-shape metadata.
- Combines coarse partition (K=6), fine partition (K=8), Stage-I backbone search, Stage-II local 2D branch reassembly, and zero-shot evaluation.
- Builds a model-structure knowledge graph and uses LLM-based analysis to summarize interpretable reassembly strategies under FLOPs/Params constraints.

Lightweight Academic Paper RAG System | Sep 2025 - Present

- Integrated PDF preprocessing, FAISS vector retrieval, Ollama/qwen2 local inference, and Streamlit UI for paper-based question answering.
- Responsible for interactive app implementation and system integration, enabling local corpus Q&A; with evidence display and evaluation results.

Intelligent Recognition of Live Pig Aggregation Behavior | Mar 2023 - Mar 2024

- Led the project and built a 3,000-image pig dataset with 6 pigs annotated per image.
- Improved YOLOv12-FasterNet-SCSA: Params reduced from 2.82M to 1.46M, FLOPs from 10.4G to 7.1G, FPS increased from 84.03 to 153.84, and mAP reached 96%.
- Designed a KNN + LOF aggregation algorithm with 93.79% behavior recognition accuracy and a 57.14% reduction in false detection rate.

12306 Ticket Analysis and Visualization Platform | Feb 2024 - Apr 2024

- Collected 12306 ticket data with Python, stored and managed data with MySQL, and built an interactive Tableau dashboard for ticket query and correlation analysis.

Museum Collection Management System | Feb 2023 - Jun 2023

- Led a database course project using MySQL, Java, and Spring Boot; implemented role-based management, invalid-input blocking, popup reminders, and image-path storage.

Research & Publications

- AAAI 2026 Workshop: An overall real-time mechanism for classification and quality evaluation of rice. Author order: 1/7.
- CAIT 2025: An Improved Pure Fully Connected Neural Network for Rice Grain Classification. Author order: 2/8.
- ECPLF 2024: Intelligent recognition of live pig aggregation behavior based on convolutional neural network. Author order: 1/2; related software copyright: Pig Aggregation Degree Calculation Software V1.0.
- Software copyrights: Rice Quality Detection Software V1.0; Pig Aggregation Degree Calculation Software V1.0.

Awards & Skills

Awards: National College Student Mathematics Competition Third Prize (2022, 2023); China Agricultural University Big Data Skills Competition Second Prize (2022); Beijing-level Computer Design Competition Third Prize (2024).

Technical skills: Python, MySQL, PyTorch, FAISS, Streamlit, FastAPI, React, TypeScript, Capacitor, Tableau, FineBI, Java, Spring Boot, YOLO, ConvNeXt, RAG workflows, data visualization.

Language: IELTS 6.5.