

Self-Introduction

Alex Chen

Westlake University · Computer Science

Westlake University

Department of Computer Science and Technology

Self-introduction Presentation



- Name: Alex Chen (陈思远)
- Education: BSc in Computer Science and Technology (AI Track)
 - Westlake University (西湖大学)
- Current Status:
 - Received MSc offer from FutureTech University
- Personal Strengths
 - Mathematical intuition: Developed early interest in similarity measures and optimization algorithms.
 - Coding skills: Proficient in end-to-end model training and deployment.
 - Oral Speaking: IELTS Oral 7.0

- Programming Languages: Python (PyTorch, NumPy, Scikit-learn), C++, Rust, SQL, LaTeX
- Tools: PyTorch, Hugging Face, Weights & Biases, Git
- Familiar Fields:
 - Data Science
 - Deep Learning Optimization
 - LLM Applications
 - Reinforcement Learning
 - Computer Vision

“In deep learning, everything is a matrix; in data science, everything is a table.”

“在深度学习中，一切皆为矩阵；在数据科学中，一切皆为表格。”

- Start from minimal working demos, expand datasets, and iterate ideas.
- Apply functional programming and modular thinking to system design.

Project 1 - Autonomous Robot Navigation 【Research Project】

- Built a multi-sensor fusion system for autonomous path planning.
- Integrated LiDAR, IMU, and vision data for robust navigation.
- Improved trajectory accuracy through dynamic obstacle avoidance.

Project 2 - Urban Traffic Flow Prediction

【Competition】

- **Competition:** Global Urban Computing Challenge (2nd Prize)
- **Goal:** Predict future traffic conditions based on temporal graph networks.
- **Techniques:** Graph neural networks, time-series forecasting, edge-level regression.

Project 3 - Knowledge Graph RAG for Scientific Literature Retrieval 【Competition】

Competition Background

- 10th Global Data Science Challenge (2023.12–2024.04)

Project Overview

- Built a RAG-enhanced system to retrieve and reason over scientific papers.
- Designed an intuitive Chatbot interface for researchers.
- Integrated LLMs with structured knowledge bases for literature recommendation.

- Research ideas are often derived from practical system limitations and user needs.
- Core Logic: observation \rightarrow hypothesis \rightarrow implementation.

项目	应用方向	核心技术	技术亮点
Robot Navigation	自动驾驶	LiDAR SLAM	动态避障与路径优化
Traffic Prediction	城市交通预测	图神经网络	时空建模与预测优化
Knowledge RAG	科研文献检索	RAG + 知识图谱	文献关系挖掘与推荐

Why Westlake University? | 为什么选择西湖大学

- Research directions align with my interests in AI and systems engineering.
- Interdisciplinary and innovative academic environment.
- Strong mentorship and collaborative research culture.
- Westlake is rapidly emerging as a center for scientific innovation.

- Short-term: Conduct applied research and publish papers.
- Long-term: Pursue PhD studies and bridge academic research with real-world applications.

- Looking forward to joining Westlake University.
- Contact:
 - Email: `example@example.com`
 - GitHub: <https://github.com/ExampleUser>