## About Me

As a Master's student in Computer Science at Chalmers, I am passionate about bridging theory and practice to build reliable, efficient systems. My interests include functional programming, programming language technology and graph-based data modeling. I am also keen on AI and mathematical modeling. I value collaboration and enjoy learning from diverse perspectives to tackle complex technical challenges.

## Skills

**Python**
Numpy, Pandas, Matplotlib, FastAPI

**Linux**
Shell, Ubuntu Server, Proxmox VE

**Database**
NebulaGraph, MySQL

**Tools**
Docker, Nginx, Cloudflare, Vscode

**Haskell**

## Campus Experiences

**FR Workshop Volunteer**
Provided guidance on tool usage to workshop participants and ensured their safety during the usage; Assisted users with bike maintenance and repair.
**July 2025 - Now**

**"Green Cycling" 100 km Around Chengdu Greenway Event**
Successfully completed a 100km campus-organized cycling event, demonstrating a strong commitment to endurance as well as environment protection.
**Jun 2023**

**CSDN Programming Club Leader**
Organize programming sharing sessions for fellow students to promote knowledge exchange and technical discussion.
**2022 - 2023**

## Interests

**Long-distance cycling and bike maintenance**

**Cooking and dessert baking**


# Shihao Xiang

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## Education

**Chalmers University of Technology** **Sep 2024 - Now**
MSc in Computer Science

**Focus**: Functional Programming, Algorithms, Programming Language Technology

**GPA**: 4.25/5

**Sichuan University** **Sep 2020 - Jun 2024**
B.Eng in Software Engineering

**GPA**: 3.6/4

## Projects

**PreciseA Server** **Dec 2024 - Now**
Personal Project

- Deployed an Intel server using Proxmox VE with network segmentation (NAT + VLAN) for security isolation.
- Self-hosted and maintained multiple services (GitLab, Code Server, Seafile etc.) with 99% uptime over 10 months.
- Configured reverse proxy, firewall and network to ensure secure multi-service operation.
- **Technologies**: Proxmox VE, Shell, Nginx, Docker, MySQL, Cloudflare

**Research on Access Method for Subgraph Optimization via Graph DataBase "NebulaGraph"** **Sep 2023 - Jun 2024**
Undergraduate Thesis

- Designed a type-safe abstraction layer for NebulaGraph using Haskell, enforcing graph schema constraints bidirectionally.
- Implemented JSON-GADTs parsers to reject schema-violating queries through Haskell's strong type system.
- Built a web-based visualization tool for interactive query exploration.
- **Advisor**: Pan Wuming (Associate Professor)
- **Technologies**: Haskell, Python, NebulaGraph, FastAPI

**UAV Flight Data Anomaly Detection and Positioning System** **Oct 2021 - Jul 2022**
Team Leader

- Led a team of 5 to build a deep learning–based anomaly detection system for UAVs using flight data from 150+ sensors.
- Developed an LSTM model with a sliding window mechanism, achieving 95%+ accuracy, and tested real-time feasibility on NVIDIA Jetson Nano.
- **Advisor**: Qiang Miao (Professor)
- **Technologies**: Python, TensorFlow, NumPy, Pandas, Matplotlib