

# Hengming Zhang

Harbin | hm.zhanghit@gmail.com | RisonaSuki.github.io | github.com/Risonasuki

## Education

### Harbin Institute of Technology

Aug 2021 – June 2025

- BS in Bioinformatics, Dept of Computer Science
- GPA: 3.73/4.0

## Experience

### Research Internship

June 2023 – Feb 2024

- Harbin Institute of Technology, Harbin, China
- Multi-agent embodied intelligence Lab ( Advisor: Fangzhou Liu)
- Research about deep learning used in Biological signal network to predict the transition of cell status

## Courseworks

**University:** Data Structures and Algorithms, Algorithmic Design and Analysis, High-level Language Programming, Software Engineering, Linear Algebra and Analytic Geometry, Calculus, Probability Theory and Mathematical Statistics.

**on-going:** Application of AIGC Technology, Introduction to Large Language Models, Reinforcement Learning

## Projects

### Fast LBF

2024

- Improve the Bloom filter and add a pre-trained neural network discriminator to reduce the misjudgment cost of the Bloom filter
- Combined with various data structures (B+ tree, LSM tree) to improve database performance
- Tools Used: Python, pytorch

### C minus compiler

2024

- Developed a compiler for simpler C style language, implement lexical analysis, grammatical analysis, syntax-directed translation and intermediate code generation
- Tools Used: C++, GNU Bison& Flex

### Database Manage System

2023

- Use B+ tree as index structure and implement buffer pool management and record management
- Use volcano model to write query execution module
- Use blocking-based concurrency control protocol to implement transaction manager and lock manager
- Tools Used: C

## Technologies

**Languages:** C++, C, Java, Python, R

**Technologies:** Numpy, Pytorch, Biopy, Sci-kit Learn

## Awards and Honors

- Academic Excellence Scholarship for 2022 Fall semester
- Academic Excellence Scholarship for 2023 Fall semester
- Outstanding Undergraduate Innovation Project Award in Harbin Institute of Technology
- Excellent Award in National University of Singapore , SoC Summer School