

SHAO Siyang

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Education

Nanyang Technological University

Aug 2021 – Jun 2025

Bachelor of Engineering (Computer Engineering)

Singapore, Singapore

- Expected: Honours (Highest Distinction); GPA: 4.58 / 5.0
- Dean's List (Academic Year 2022-23)
- Relevant Modules: Algorithm Design and Analysis, Operating System, Advanced Computer Architecture, Computer Network, etc.

Skills Summary

- **Languages:** C++, C, Java, Python, Go
- **Tools:** Linux, Bash, Git, Docker, Kubernetes, Knative

Academic Projects

NTU International Collegiate Programming Contest (ICPC) Team

Team FailedSystemTest / CheesyLeopard

Dec 2021 – Current

- **Impact:** Representing the school in competitive programming algorithm contests, using C++ as the primary language
- **Awards:** Secured the Silver medal at the ICPC Asia Manila Regional, ranking 2nd among all participating teams.

vHive Community

<https://github.com/vhive-serverless/vHive>

Supervised by Professor Dmitrii Ustiugov

May 2023 - Current

- **GPU support research in vHive**
 - Tested serverless systems with GPU based on **Knative** and **Kubernetes** framework
 - Constructed Knative functions using **Go** to assess serverless GPU applications
 - Created document and installation script and merged into project
- **Impact of PCIe Stress Level on Model Latency**
 - Using **Python** and **Bash** to carry out a performance evaluation of model latency under different PCIe stress levels
 - Participating in additional research on PCIe-based interference during co-location of models in several situations, including server-grade or edge-grade GPU for multiple small models and managing model-level parallelism within a GPU cluster for large models.

URECA Project - Deoxys

<https://github.com/SiyangShao/Deoxys>

Fast Software Implementations of New Cryptographic Primitives

Mar 2023 - Jul 2023

- Implement a system that optimizes calculations using Intel AES intrinsics on the x86-64 architecture, using C language
- Analyzing **assembly** code for instruction set pipelining, achieve a balance in the latency and CPI of the instructions

Hawker Centre Website (Software Engineering Course Project)

Team Leader

Feb 2023 - Apr 2023

- Plan a platform for stalls in hawker centres to post their food and for customers to discover hawker centres
- Design a website with frontend and backend separation, using **Java**, **JavaScript**
- Based the website on **MongoDB**, **Spring Boot**, and **React** technologies

Co-Curricular Activities

NTU Open Source Society

HackOSS Technical Director

Jun 2022 - Jun 2023

- Organized open-source community events in 'HackOSS Day'
- Lead team to complete projects, help team members learn and use open-source tools

Awards

- 2022 ICPC Asia Manila Regional Second Place (Silver Medal) Dec 2022
- Shopee Code League Finalist Mar 2022
- ICPC Training Camp Powered by Huawei (Top 10 in South East Asia and Asia Pacific) Feb 2022