

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:** Bash, CUDA, Docker, Git, Linux, Kubernetes, Knative

Work Experience

TikTok Pte. Ltd.

Singapore

Backend Engineer Intern (Video Infrastructure)

(scheduled) Jan 2024 – May 2024

Academic Projects

NTU International Collegiate Programming Contest (ICPC) Team

<https://icpc.global/ICPCID/B15T259WIX3C>

Team FailedSystemTest / CheesyLeopard

Dec 2021 – Current

- **Impact:** Representing the school in **competitive programming contests**, using C++ to solve complex algorithm questions.
- **Awards:** Secured the Silver medal at the ICPC Asia Manila Regional. Qualified for 2023-24 ICPC Asia Pacific Playoff.

vHive Community

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

Supervised by Professor Dmitrii Ustiugov

May 2023 – Current

- Impact of NVIDIA MIG on GPU Performance
 - Using **NVIDIA MIG** on A100, segmenting a single GPU into multiple MIG instances and Compute Instances to investigate their impact on LLM inference latency.
- Impact of PCIe Stress and Memory bandwidth on LLM inference
 - Using **Python** and **Bash** to carry out a performance evaluation of large language model inference latency under different stressors.
 - Segmented LLM Inference into multiple states and investigated the impact of various factors on latency across different processes.

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

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 Silver Medal (Ranked 2) Dec 2022
- 2023 ICPC Asia Jakarta Regional Ranked 13 Dec 2023
 - Qualified for 2023-24 ICPC Asia Pacific Region Playoff Contest
- Shopee Code League Finalist Mar 2022
- ICPC Training Camp Powered by Huawei (Top 10 in South East Asia and Asia Pacific) Feb 2022