

SHAO-YUAN WANG

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🌐 <https://github.com/albert037037037>

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EDUCATION

National Tsing Hua University, Hsinchu, Taiwan

Sept. 2018 - June. 2022 (Expected)

Bachelor in Computer Science

- **Overall GPA:** 4.24/4.3.
- **Award:** Outstanding Academic Achievement Award (2019 Fall, 2020 Spring, 2020 Fall, 2021 Spring)
- **Scholarship:** Outstanding Student Scholarship of College of Electrical Engineering and Computer Science
- **Key Coursework:** Operating System, Computer Architecture, Database Systems, Design and Analysis of Algorithms, Parallel Programming, Software Engineering, Massive Data Analysis, Data Structures.

WORK EXPERIENCE

Teaching Assistant for Introduction of Programming Course in NTHU.

Mar. 2021 - Jan. 2022

- Over 120 students in the class.
- Assist students solve C/C++ programming problems
- Assist them get familiar with Object-oriented programming.

Teaching Assistant for Operating System Course in NTHU.

Sept. 2021 - Jan. 2022

- Over 130 students in the class.
- Assist students get familiar with operating system.
- Assist students to accomplish their homework on simulated operating system.

SELECTED PROJECTS

AI Platform on Kubernetes for Automated ML Pipeline Development and Operations

- Container-based resource management.
- Service-based web portal for model and data sharing.
- Data governance controlled by contract and access control.
- All micro services are deployed on Kubernetes cluster.
- Private registry with authorization to guarantee isolation.

Improve performance of Hermes, a deterministic database system prototype, on hot counter workload

- Design a routing mechanism with data replication and reordering techniques to reduce data transfer between nodes.
- 14% improvement compared to original mechanism.

Implement part of system in NachOS

- Implement system call in NachOS to open, write, read, close a file.
- Implement page table in NachOS to support multi-programming.
- Implement a multi-level feedback queue scheduler with aging mechanism.
- Modify NachOS file system to support larger file size, subdirectory, multi-level header size and recursive operations on Directories.

Design a Producer-Consumer problem using pthread for students of operating system class

- Object-oriented programming with C++.
- Thread programming using pthread to solve the problem.

TECHNICAL SKILLS

Programming: C, C++, JavaScript, Pthread, MPI, OpenMP, Java, C#, Python, Verilog.
Software & Tools: **Backend:** Express.js, MongoDB, Mongoose.
FrontEnd: Vue.js.
System: Kubernetes.
Others: Docker, Git, Pyspark, Slack.

HONOURS

Best Implementation Award and Best Presentation Award in Introduction to Database Course *June 2021*

- Improve Hermes, which employs a novel transaction routing mechanism, on specific workload.
- First place in 21 groups.

Outstanding Academic Achievement Award

- Department of Computer Science, National Tsing Hua University.
- Awarded four times respectively at *2019 Fall, 2020 Spring, 2020 Fall, 2021 Spring*.

EXTRACURRICULAR

- Coordinator of National Tsing Hua University Computer Science Orientation Camp *Apr.2019 - Sept. 2019*
- Leader of Activities Department of Student Association of Computer Science Department *Sept. 2019 - Jun. 2020*