Kai-Siang Wang

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RESEARCH INTERESTS

Systems for ML, Distributed Systems, Internet of Things, Edge Computing, Cloud Computing

EDUCATION

- **University of Illinois Urbana-Champaign (UIUC)**　　　　　　Urbana, IL, USA
  Ph.D. in Computer Science　　　　　　　　　　　　　　　*Aug 2023 – Present*
  Advised by Professor Indranil (Indy) Gupta

- **National Tsing Hua University**　　　　　　　　　　　　　Hsinchu, Taiwan
  Master's degree - CS　　　　　　　　　　　　　　　　*Sep 2021 - Jan 2023*
  Advised by Professor Jerry Chou

- **National Tsing Hua University**　　　　　　　　　　　　　Hsinchu, Taiwan
  Bachelor's degree - EECS　　　　　　　　　　　　　　*Sep 2017 - Jun 2021*
  Advised by Professor Jang-Ping Sheu

PUBLICATIONS

- **Kai-Siang Wang**, Jerry Chou. **"A Reservation-Based List Scheduling for Embedded Systems with Memory Constraints."**: In *PDCAT*, 2022.

- **Kai-Siang Wang**, Cheng-Han Hsieh and Jerry Chou. **"Optimal Static Bidding Strategy for Running Batch Jobs with Hard Deadline Constraints on Spot Instances."**: In *CLOSER*, 2023

- Chen-Chun Chen, **Kai-Siang Wang**, Yu-Tung Hsiao, Jerry Chou. **"ALBERT: An automatic learning based execution and resource management system for optimizing Hadoop workload in clouds."**: in *Journal of Parallel and Distributed Computing*, vol. 168, pp. 45-56, Oct 2022

RESEARCH EXPERIENCE

- **DPRG Research Group, University of Illinois Urbana-Champaign**　　　Urbana, IL, USA
  Graduate Research Assistant　　　　　　　　　　　　　　　*Aug 2023 – Present*
  - **Implementation**: Implement NVDLA using C++.
  - **Version Control**: Work with collaborators and use Git for version control.

- **LSA Lab, National Tsing Hua University**　　　　　　　　　　Hsichu, Taiwan
  Graduate Research Assistant　　　　　　　　　　　　　　*Mar 2021 - Jan 2023*
  - **Implementation**: Implement NVDLA using C++.
  - **Version Control**: Work with collaborators and use Git for version control.

- **HSCC Lab, National Tsing Hua University**　　　　　　　　　Hsichu, Taiwan
  Undergraduate Research Assistant　　　　　　　　　　　*Sep 2020 - Jan 2021*
  - **Implementation**: Implement NVDLA using C++.
  - **Version Control**: Work with collaborators and use Git for version control.

INDUSTRY EXPERIENCES

- **Skymizer Inc.**　　　　　　　　　　　　　　　　　　Taipei, Taiwan
  Software engineer Part-time　　　　　　　　　　　　*May 2021 - March 2023*
  - **Forest Runtime - Runtime that can execute executables provided by ONNC**: Participated in the runtime implementation in C and provided Python API.
  - **Research**: Surveyed and proposed scheduling algorithms to fully utilize the hardware.
  - **DL Pipeline Implementation**: Based on Pipedream(proposed by Microsoft), implement an asynchronous pipeline for DNN inference.

- **Industrial Technology Research Institute**　　　　　　　　　Hsinchu, Taiwan
  System Architect Intern　　　　　　　　　　　　　　　*Jul 2018 - Dec 2018*
  - **Implementation**: Implement NVDLA using C++.
  - **Version Control**: Work with collaborators and use Git for version control.

- **Twister5 Inc.**　　　　　　　　　　　　　　　　　　Taipei, Taiwan
  Full-stack developer Part-time　　　　　　　　　　　　*Dec 2021 - May 2022*
  - **Admin Panel**: Use Vuejs to build the admin panel monitor the status of servers
  - **Backend Development**: Build a REST api with NEST.js and mongoDB.

Teaching Experience

- **Computer Science Department, University of Illinois Urbana-Champaign** — Urbana, IL, USA
  Graduate Teaching Assistant — *Fall 2024*
    - CS425 Distributed Systems

- **Computer Science Department, National Tsing Hua University** — Hsinchu, Taiwan
  Graduate Teaching Assistant — *Fall 2022*
    - CS542200 Parallel Programming

Skills

- **Languages**: Python, C++, SQL, Java, JavaScript
- **Frameworks**: TensorFlow, PyTorch, NodeJS
- **Tools**: Kubernetes, Docker, Git, PostgreSQL, MongoDB
- **Platforms**: Linux, Web, Windows, AWS, GCP