WEI WEI

1 UTSA Circle, NPB 2.248, San Antonio, TX 78249
Email: iamdoublewei@gmail.com ⋄ Phone: 281-468-7609
LinkedIn: linkedin.com/in/wei-wei-27b484ba ⋄ Website: iamdoublewei.github.io/

EDUCATION

The University of Texas at San Antonio *2020 - Present*
Doctor of Philosophy - PhD Overall GPA: 4.0/4.0
Major: Computer Science

The University of Texas at San Antonio *2020 - 2024*
Master's Degree Overall GPA: 4.0/4.0
Major: Computer Science

The University of Texas at San Antonio *2015 - 2017*
Master's Degree Overall GPA: 4.0/4.0
Major: Computer Engineering

EXPERIENCE

The University of Texas at San Antonio San Antonio, TX
Graduate Research/Teaching Assistant *Sep 2020-Present*

- Conducting research on optimizing over-the-air update efficiency for energy harvesting IoT devices.
- Collaborating on strategies to enhance intermittent deep learning and intermittent computing performance.

Leaptran San Antonio, TX
Software Development Engineer *Jul 2017-Jul 2020*

- Designed and implemented an energy-efficient building management system for commercial buildings.
- Developed a scalable RESTful API using PHP and the Lumen framework.
- Conducted data preprocessing with SQL and Python for analysis.
- Managed client data using MySQL and Grafana for information retrieval and decision-making.

Leaptran San Antonio, TX
Software Development Engineer Intern *Mar 2017-Jun 2017*

- Researched technologies for recording occupant behavior and HVAC control systems in commercial and residential buildings.
- Designed and implemented Python modules to store data in PostgreSQL and control devices via REST APIs for occupant behavior and HVAC system studies.

The University of Texas at San Antonio San Antonio, TX
Graduate Research Assistant *Jan 2016-May 2017*

- Conducted research in computer architecture, developing a dynamic IQ-capping technique to enhance Instructions Per Cycle (IPC) for simultaneous multi-threading processors using the C++ M-Sim simulator.

AWARDS

1. Received the Graduate School Professional Development Travel Award from The University of Texas at San Antonio (2024).

2. Received NSF ISVLSI Student Travel Grant Award (2024).

3. Winner of the 2-Minute Video Contest at the 59th Design Automation Conference (DAC) Young Fellow Program (2022).

4. Young Fellow Program at the 59th Design Automation Conference (DAC) (2022).

5. Received the Graduate School Professional Development Travel Award from The University of Texas at San Antonio (2022).

6. Young Fellow Program at the 58th Design Automation Conference (DAC) (2021).

7. Received Pioneer Scholarship from The University of Texas at San Antonio (2016).

8. Received Competitive Valero Research Scholarships from The University of Texas at San Antonio (2015).

SKILLS

Programming Skills:
C++, C, C#, Python, PHP, Assembly, SQL

Other Technical Skills:
Embedded Systems, REST API, Machine Learning, Deep Learning, MySQL, PostgreSQL, MQTT, Modbus, BACnet, TCP/IP, Git, JSON, Linux

Languages:
English, Chinese

PUBLICATIONS AND MANUSCRIPTS

1. Wei Wei, Jingye Xu, Sahidul Islam, Chen Pan, Dakai Zhu, and Mimi Xie. Live ota update via dynamic dependency-aware scheduling in energy harvesting iot devices. Manuscript in preparation, 2025
2. Shyamala Palanisamy, Wei Wei, and Mimi Xie. Energy-efficient persistently secure block-based differential checkpointing for energy harvesting devices. In *Proceedings of the International Symposium on Quality Electronic Design (ISQED)*, 2025
3. Sahidul Islam, Wei Wei, Jishnu Banerjee, and Chen Pan. Energy-adaptive checkpoint-free intermittent inference for low power energy harvesting systems. In *Proceedings of the International Symposium on Quality Electronic Design (ISQED)*, 2025
4. Wei Wei, Jishnu Banerjee, Sahidul Islam, Chen Pan, and Mimi Xie. Energy-aware incremental ota update for flash-based batteryless iot devices. In *2024 IEEE Computer Society Annual Symposium on VLSI (ISVLSI)*, pages 51–56, 2024
5. Wei Wei, Chen Pan, Sahidul Islam, Jishnu Banerjee, Shyamala Palanisamy, and Mimi Xie. Intermittent ota code update framework for tiny energy harvesting devices. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 2024
6. Jishnu Banerjee, Sahidul Islam, Wei Wei, Chen Pan, and Mimi Xie. Autotile: Autonomous task-tiling for deep inference on battery-less embedded system. In *Proceedings of the Great Lakes Symposium on VLSI 2024*, pages 323–327, 2024
7. Wei Wei, Sahidul Islam, Jishnu Banerjee, Shanglin Zhou, Chen Pan, Caiwen Ding, and Mimi Xie. An intermittent ota approach to update the dl weights on energy harvesting devices. In *2022 23rd International Symposium on Quality Electronic Design (ISQED)*, pages 1–6. IEEE, 2022
8. Jiannan Cai, Xin Li, Xiaoyun Liang, Wei Wei, and Shuai Li. Construction worker ergonomic assessment via lstm-based multi-task learning framework. In *Construction Research Congress 2022*, pages 215–224, 2022

9. Jishnu Banerjee, Sahidul Islam, Wei Wei, Chen Pan, Dakai Zhu, and Mimi Xie. Memory-aware efficient deep learning mechanism for iot devices. In *2021 IEEE 32nd International Conference on Application-specific Systems, Architectures and Processors (ASAP)*, pages 187–194. IEEE, 2021

10. Wei Wei. A dynamic iq-capping technique for simultaneous multi-threading processors. Master's thesis, The University of Texas at San Antonio, 2017

PROFESSIONAL ACTIVITIES

1. Reviewer for IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2025; reviewed 3 papers.
2. Reviewer for IEEE Cloud Summit (Cloud Summit) 2025; reviewed 2 papers.
3. Reviewer for The Journal of Supercomputing 2025; reviewed 1 paper.
4. Reviewer for the 40th ACM/SIGAPP Symposium on Applied Computing (SAC) 2025; reviewed 2 papers.
5. Reviewer for the 9th ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI) 2024; reviewed 1 paper.
6. Successfully passed PhD dissertation proposal (2024).
7. Participated in the 12th International Green and Sustainable Computing Conference (IGSC) Student Research Forum (2021).