

# SHAWN ZHONG

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## EDUCATION

### University of Wisconsin-Madison

Ph.D. in Computer Sciences

GPA: 3.97

Sept. 2020 - May 2026 (Est.)

- Advisors: Andrea Arpaci-Dusseau and Remzi Arpaci-Dusseau

- Research Areas: Operating System, Kernel Extension, Filesystem, Persistent Memory

B.S. in Computer Sciences & Mathematics

GPA: 3.98

Sept. 2017 - June 2020

- Competitive Programming: ACM-ICPC NCNA #7, #9, and #22 in 2019, 2018, and 2017

## RESEARCH

**Ongoing** Towards Customizable Filesystem Frameworks via Lightweight Kernel Extensions. *Shawn Zhong, et al.*

**Ongoing** Analyzing and Reproducing Bugs in the Linux Kernel Task Scheduler. *Shawn Zhong, et al.*

**EuroSys '25** Revealing the Unstable Foundations of eBPF-Based Kernel Extensions.

[Paper](#) | [Code](#) | [Dataset](#)

*Shawn Zhong, Jing Liu, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau.*

**FAST '23** MadFS: Per-File Virtualization for Userspace Persistent Memory Filesystems.

[Paper](#) | [Code](#)

*Shawn Zhong, Chenhao Ye, Guanzhou Hu, Suyan Qu,*

*Andrea Arpaci-Dusseau, Remzi Arpaci-Dusseau, and Michael Swift.*

**EMNLP '20** PBoS: Probabilistic Bag-of-Subwords for Generalizing Word Embedding.

[Paper](#) | [Code](#)

*Zhao Jinman, Shawn Zhong, Xiaomin Zhang, and Yingyu Liang.*

## EXPERIENCE

**Intern at Meta.** Triton ML Compiler Team under PyTorch

*Menlo Park, CA*

*Summer 25*

- Optimized load balance for jagged kernel, improving production performance by up to 35% on AMD GPUs.
- Developed intra-thread-block GPU kernel profiling with MLIR ops for global timestamps measurement.
- Designed and implemented Triton support on Compiler Explorer for IR visualization and comparison.

[Code](#)

[Website](#) | [Code](#)

**Intern at DataChat.** An AI data analytics startup

*Madison, WI*

*Summer 19*

- Developed a rule-based recommendation system to suggest follow-up questions based on previous conversations.
- Optimized table stats collection and CSV ingestion. Implemented PDF report generation and frontend hot reloading.

## PROJECTS

**NCCL-sharing.** Optimize GPU computation and communication with efficient resource sharing.

[Report](#) | [Code](#)

**libfutex.** A library for robust cross-process synchronization based on Linux futexes.

[Code](#)

**Jenn3D.** A high-dimensional polytope visualization tool ported from C++ to WebAssembly.

[Website](#) | [Code](#)

**JsSpim.** An online MIPS32 instruction set simulator written with JavaScript and WebAssembly.

[Website](#) | [Code](#)

**xv6 Filesystem Visualizer.** An interactive tool for visualizing and validating xv6 filesystem images.

[Website](#) | [Code](#)

## COMMUNITY

**Open Source Contributor** of [Triton](#), [PyTorch](#), [fmlib](#), [BCC](#), [bpftime](#), [Compiler Explorer](#), [LLVM](#), [pandas](#), [Loop](#).

**Artifact Evaluation Member** for Systems Conferences: [FAST 26](#), [OSDI 25](#), [SOSP 24](#), [OSDI 24](#), [ATC 24](#), [FAST 24](#).

**Shadow Program Committee Member** for [EuroSys 26](#).

## SKILLS

**General:** Linux Kernel Development, Performance Analysis, Machine Learning Systems, Data Analytics

**Programming Languages:** C/C++, Python, Rust, Java, Dafny, SQL, JavaScript

**Frameworks & Softwares:** Triton, CUDA, eBPF, WebAssembly, PyTorch, LLVM/MLIR