

SAMANTHA MILLER

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EDUCATION

University of Washington *September 2018 - Present (Expected December 2023)*
Ph.D., MS. in Computer Science Overall GPA: 3.98/4.0
Advisors: Tom Anderson and Danyang Zhuo

University of Texas *August 2014 - May 2018*
Bachelor of Computer Science, Honors Overall GPA: 3.98/4.0

RESEARCH PROJECTS

High Velocity Linux Kernel Development

Research on **extending agile development to the Linux kernel** without sacrificing performance. **Bento** enables file systems written in safe Rust and supports live upgrade and userspace debugging. **Ekiben** extends Bento to schedulers, adding coordination with userspace and record and replay.

TECHNICAL STRENGTHS

Programming (proficient) Linux, Rust, C, Python
Programming (familiar) C++ JavaScript, Java

WORK EXPERIENCE

Google May-August 2018
Ph.D. Software Engineering Intern

Rewrote a Chrome OS probing tool in Rust to improve code quality; increased security of the probing tool using jails.

Google 2015-2017
Two Engineering Practicum and One Software Engineering Internships

SUBMITTED PUBLICATIONS

Samantha Miller, Anirudh Kumar, Tanay Vakharia, Tom Anderson, Ang Chen, Danyang Zhuo. *Agile Development of Linux Schedulers with Ekiben*. 2023.

CONFERENCE PUBLICATIONS

Samantha Miller, Kaiyuan Zhang, Mengqi Chen, Ryan Jennings, Ang Chen, Danyang Zhuo, Tom Anderson. *High Velocity Kernel File Systems with Bento*. FAST '21. **Best Paper Award**

WORKSHOP PAPERS AND INVITED ARTICLES

Jialin Li, **Samantha Miller**, Danyang Zhuo, Ang Chen, Jon Howell, Tom Anderson. *An Incremental Path Towards a Safe OS Kernel*. HotOS '21.

Samantha Miller, Kaiyuan Zhang, Danyang Zhuo, Shibin Xu, Arvind Krishnamurthy, Tom Anderson. *Practical Safe Linux Kernel Extensibility*. HotOS '19.

Samantha Miller, Kaiyuan Zhang, Mengqi Chen, Ryan Jennings, Ang Chen, Danyang Zhuo, Tom Anderson. *High Velocity Kernel File Systems with Bento*. USENIX ;login;, 2021.