Sid **Agrawal**

Software Engineer · Graduate Student

Vancouver, Canada

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Summary

Ph.D. student seeking summer internships with a research focus on operating systems and security. Prior experience as a software engineer in kernel development and DevOps roles.

Education

University of British Columbia

Vancouver, BC, Canada

PhD. in Computer Science: Operating Systems architecture and security

Jan. 2021 - Dec 2025

- Advised by Prof. Margo Setlzer
- Developed a formal model to express and compare different isolation abstractions available in an OS.
- Implement a framework to let the user explore the design space of all OS isolation abstractions.

University of Florida

Gainesville, Florida, USA

MS. in Electrical and Computer Engineering

Aug. 2010 - Dec. 2011

BITS(Birla Institute of Technology and Science) Pilani

Goa, India

B.E. in Electrical and Electronics Engineering

Aug. 2005 - Aug. 2009

Work Experience

ARM

Vancouver, BC, Canada

Intern, Research - Systems Security

May 2022 - Aug 2022

- Ported a microkernel (seL4) to a new hardware platform (CHERI) link

Arista Networks

Vancouver, BC, Canada

Software Engineer

Sep. 2016 - Dec. 2020

- Developed micro-services to detect and automatically triage faulty testbeds

Panzura

Campbell, CA, USA

Software Engineer

Apr. 2015 - Aug. 2016

- Designed and implemented support to transactionally update file metadata for Panzura's Global Distributed File System which heavily simplified recovery after crashes.

Oracle

Santa Clara, CA, USA

Solaris Kernel Engineer

Mar. 2012 - Apr. 2015

- Enhanced the virtual memory predictor in Solaris by developing an algorithm to determine which segments in the address space can be upgraded to large pages
- Developed C and assembly level kernels to stress test cache interconnects and database co-processor of the SPARC microprocessor

Publications

OSmosis: No more Déjà vu in OS isolation

ArXiv 2309.09291

Sidhartha Agrawal, Reto Achermann, and Margo Seltzer

CHERI-picking: Leveraging capability hardware for prefetching

PLOS 2023

Shaurya Patel, **Sidhartha Agrawal**, Alexandra Fedorova, and Margo Seltzer