Sid Agrawal

SOFTWARE ENGINEER · GRADUATE STUDENT

Vancouver, Canada

✉ sid@sid-agrawal.ca | 🏠 sid-agrawal.ca | ⬛ sid-agrawal | in sidhartha-agrawal

Summary

Graduate Student pursuing operating systems research. Prior experience as a software engineer in kernel development, and DevOps roles.

Education

University of British Columbia   *Vancouver, BC, Canada*
PHD. IN COMPUTER SCIENCE   *Jan. 2021 - present*

- Operating Systems Research at the Systopia Lab

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*

Continuing Education

Stanford   *Stanford, CA, USA*
NON-DEGREE COURSEWORK   *Jan. 2014 - Apr. 2014*

- Operating Systems undergraduate course (CS140)

University of California Santa Cruz, Extention Campus   *Santa Clara, CA, USA*
NON-DEGREE COURSE WORKS   *Jan. 2012 - May. 2013*

- Two courses on Linux and device driver programming

Research Experience

ARM   *Vancouver, BC, Canada*
INTERN, RESEARCH - SYSTEMS SECURITY   *May 2022 - Aug 2022*

- Combining seL4 and CHERI/Morello capabilities

Systopia Lab (Advisor Prof. Margo Seltzer)   *Vancouver, BC, Canada*
RESEARCH ASSISTANT   *Jan 2021 - present*

- Investigating the common building blocks for different isolation mechanisms like processes, containers, virtual machines. Implement a mechanism that lets the user select the desired level of isolation for a given resource without depending on the mechanisms.

Work Experience

Arista Networks   *Vancouver, BC, Canada*
SOFTWARE ENGINEER   *Sep. 2016 - Dec. 2020*

- Co-developed services to store build artifacts generated in the build process
- Co-Developed a glue layer in GoLang for a NoSQL backend for a distributed build system
- Independently developed services to detect and automatically triage faulty testbeds

Panzuara   *Campbell, CA, USA*
SOFTWARE ENGINEER   *Apr. 2015 - Aug. 2016*

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

Oracle(Solaris Group)   *Santa Clara, CA, USA*
KERNEL ENGINEER   *Apr. 2013 - 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
- Improved performance of multiple system calls by making their O() page size independent

Oracle(SPARC Microprocessor Group)   *Santa Clara, CA, USA*
Hardware Engineer   *Mar. 2012 - Apr. 2013*

- Developed C and assembly level kernels to stress test cache interconnects and database co-processor of the SPARC microprocessor

Honors & Awards

2021   **Tuition Award,** President's Academic Excellence Initiative Ph.D. Award   *University of British Columbia*

2021   **Tuition Award,** Faculty of Science Ph.D. Tuition Award   *University of British Columbia*

2010   **Tuition Award,** Achievement Award, College of Engineering   *University of Florida*

2006   **Tuition Award,** Need-based merit scholarship, BITS Pilani, India. 2005-2009   *BITS Pilani*

Honors & Awards