

# SIDHARTHA AGRAWAL

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## RESEARCH INTERESTS

Operating Systems

## EDUCATION

**University of British Columbia, Canada**

**2021 - present**

- Ph.D. in Computer Science

**University of Florida, USA**

**2010 - 2011**

- Masters in Computer Engineering  
3.83/4.00

**BITS Pilani, Goa Campus, India**

**2005 - 2009**

- Bachelors in Electrical and Electronics Engineering  
8.09/10.00

## CONTINUING EDUCATION

**University of California, Santa Cruz, CA, USA**

**2012 - 2013**

- Non-degree coursework: Linux Kernel Architecture and Programming (Grade A)

**Stanford University, CA, USA**

**Jan - Apr 2014**

- Non-degree coursework: Operating Systems - CS 140 (Grade A)

## RESEARCH EXPERIENCE

**Research Assistant, Systopia, University of British Columbia, Canada**

**2021 - present**

Advisor: Dr. Margo Seltzer

- 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.

## PROFESSIONAL EXPERIENCE

**Software Engineer, Arista Networks, Canada**

**Sep 2016 - Present**

- 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

**Software Engineer, Panzura, CA, USA**

**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.

**Engineer, Solaris, and SPARC, Oracle, CA, USA**

**Mar 2012 - Apr**

**2015**

**Kernel Engineer:**

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- 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

### **Hardware Engineer:**

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

## **SKILLS**

- Languages: C, Go, Assembly
- File systems, operating systems(seL4, Linux)
- Orchestration: Docker, Kubernetes

## **HONORS AND AWARDS**

- President's Academic Excellence Initiative Ph.D. Award, University of British Columbia. 2021
- Faculty of Science Ph.D. Tuition Award, University of British Columbia. 2021
- Achievement Award, College of Engineering, University of Florida, US. 2010-2011
- Need-based merit scholarship, BITS Pilani, India. 2005-2009

## **REFEREES**

- Dr. Margo Seltzer, Professor of CS, University of British Columbia, Canada
- Dr. Sasha Fedorova, Associate Professor of ECE, University of British Columbia, Canada
- Dr. Amalin Prince, Associate Professor of EE, BITS Pilani Goa, India
- Eric Ellenof, Director of Software Engineering, Arista Networks, US