

# David Domingo

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## EDUCATION

**Rutgers University – School of Graduate Studies**, *New Brunswick, NJ*

*Ph.D. in Computer Science*

*Sept. 2018 – May. 2023(expected)*

Advisor: **Dr. Sudarsun Kannan**

**Rutgers University – School of Arts and Sciences**, *New Brunswick, NJ*

*B.S. in Computer Science*

*Sept. 2013 – May. 2017*

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## RESEARCH EXPERIENCE

**pFSCK: Accelerating File System Crash Recovery**

Guide: **Dr. Sudarsun Kannan**, *Rutgers University*

*Jan. 2019 – Present.*

- Utilize modern parallel programming and adaptive scheduling techniques to exploit modern storage capabilities and reduce the runtime of modern file system checking and recovery for EXT file systems.
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## WORK EXPERIENCE

**Rutgers University**, *New Brunswick, NJ*

*Research Assistant (Department of Computer Science)*

*June. 2021 – Present.*

- Research I/O scheduling and performance scalability for I/O-intensive applications on modern storage technologies
- Research carried out as part of the **Rutgers System Research Lab**, advised by **Dr. Sudarsun Kannan**

**Rutgers University**, *New Brunswick, NJ*

*Teaching Assistant (Department of Computer Science)*

*Sept. 2018 – May. 2021*

- Lead recitations as well as develop projects exploring various computer science topics such as Computer Assembly, Operating System Mechanisms, RPCs, Restful Web Services, and distributed computing frameworks such as MapReduce
- Courses include: CS419: Computer Security, CS417: Distributed Systems, CS416: Operating Systems Design, CS211: Computer Architecture

**Rutgers University**, *New Brunswick, NJ*

*Instructor (Department of Computer Science)*

*May. 2020 – Aug. 2020*

- Developed and presented lectures and materials covering topics around computer architecture such as computing components, C programming, assembly, digital logic, and caching
- Managed teaching assistants to assist with development of course projects and forum discussions
- Courses include: CS211: Computer Architecture

**iCIMS**, *Holmdel, NJ*

*Software Engineer*

*Jan. 2018 – Aug. 2018*

- Test Lead for iCIMS strategic integrations agile team (team of 5)
- Primarily used Java/Spring and Javascript/Node.js to develop and test internal integration services that communicated with iCIMS Recruit software
- Developed initial scalable test plans and approaches to allow for fast continuous integration and deployment
- Researched testing tools for Node.js that allowed for scalable development of automated test cases
- Led frequent discussions to ensure our architectural approach for our services will yield testable/verifiable features
- Aided project progress by expanding outside of test and developed integration service features alongside main developers
- Researched and architected approaches to handle user forwarding to create a seamless user interaction with microservices

**IBM**, *Durham, NC*

*Software Developer Intern*

*June. 2015 – Dec. 2015*

- Software Developer intern for IBM's Rational Team Concert source code management software which focussed on aiding the agile development of enterprise applications running on IBM's mainframe systems
  - Utilized Java and ANT scripting to develop various tools for project data migration for internal SCM integration efforts.
  - Carry out regression testing to verify proper functionality of vital software components throughout the agile development lifecycle
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## PUBLICATIONS

- [1] David Domingo and Sudarsun Kannan. pFSCK: Accelerating File System Checking and Repair for Modern Storage. In *19th USENIX Conference on File and Storage Technologies (FAST '21)*, 2021.
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## INVITED TALKS AND PRESENTATIONS

**Linux Storage and Filesystems Conference (VAULT '20)**, *Santa Clara, CA*

Topic: *Accelerating Filesystem Checking and Repair with pFSCK*

*February 2020*

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## AWARDS AND GRANTS

- Travel Grant Recipient: [USENIX Conference on File and Storage Technologies \(FAST '20\)](#)
  - Travel Scholarship Recipient: [ACM Symposium on Operating Systems Principles \(SOSP '19\)](#)
  - ACM Student Research Competition Travel Award: [ACM Symposium on Operating Systems Principles \(SOSP '19\)](#)
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## TEACHING EXPERIENCE

**Rutgers University**, *New Brunswick, NJ*

*Topic: Teaching Assistant for the Department of Computer Science*

*Sept. 2018 – Present.*

CS211: Computer Architecture (Summer '19), CS416: Operating Systems Design (Fall '19, Spring '20),

CS417: Distributed Systems (Fall '18), CS419: Computer Security (Spring '19)

**Rutgers University**, *New Brunswick, NJ*

*Topic: Instructor for the Department of Computer Science*

*May. 2020 – Aug. 2020*

CS211: Computer Architecture (Summer '20)

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## ACADEMIC PROJECTS

### Bitcoin Transaction Latency

*Guide: Dr. Richard Martin, Rutgers University*

*Sept. 2017 – Dec. 2017*

- Semester long project exploring the latency of the Bitcoin network by performing statistical analysis on public Bitcoin transaction data.

### Distributed Social Networking

*Guide: Dr. Naftaly Minsky, Rutgers University*

*May. 2017 – Aug. 2017*

- Independent study exploring Social Network Analysis Theory and Distributed Computing models to determine a feasible distributed social networking model utilizing Moses middleware developed at Rutgers University.
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## SKILLS & OTHERS

**Programming Languages:** C/C++, Java, Python, JavaScript, MySQL, Matlab, Shell, Assembly

**Markup Languages:** HTML, CSS, XML, Markdown,  $\LaTeX$

**Frameworks:** Hadoop, MapReduce, Spark, Spring, Node.js, Flask, Nvidia CUDA, OpenCL

**Development Tools:** Git, Maven, Gradle, Docker, GDB, QEMU, Valgrind, Intel VTune

**Software and Applications:** Microsoft Office, Adobe Photoshop

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