

Priya Srikumar

<https://priasrikumar.com>

EDUCATION

Cornell University

Ph.D. in Computer Science

Ithaca, NY

Expected May 2026

- *Relevant Coursework:* [Advanced Systems](#), [System Security](#), [Computer Architecture](#)

Cornell University

B.S. in Computer Science

Ithaca, NY

May 2021

- *Relevant Coursework:* [Advanced Algorithms](#), [Advanced Compilers](#), [Advanced Programming Languages](#)

EXPERIENCE

Amazon Web Services, Inc.

Applied Scientist Intern, Automated Reasoning Group

Boston, MA

May 2022 - Aug 2022

- Formulated an invariant to verify the memory safety of arbitrary call sequences to a C API using [CBMC](#)
- Collaborated with API engineers to deploy proofs with the API + support proofs in continuous integration
- Developed and documented a methodology to verify Rust codebases with foreign function calls using [Kani](#)

Amazon Web Services, Inc.

Applied Scientist Intern, Automated Reasoning Group

Boston, MA

May 2021 - Sep 2021

- Applied function contracts to a critical [s2n-tls](#) module and checked its memory safety using [CBMC](#)

Amazon.com, Inc.

Software Development Engineer Intern

Seattle, WA

May 2020 - Aug 2020

- Built, tested, and deployed a new internal Java API impacting over a million monthly active users

RESEARCH

Cornell Department of Computer Science, Professor [Andrew Myers's Lab](#)

Graduate Researcher

Ithaca, NY

Sep 2021 - Present

- Formalize sequential and parallel execution models for a [security-focused hardware description language](#)
- Develop a direct interpreter for the language in OCaml to increase accessibility to hardware researchers
- Mechanize language semantics and proofs of semantic + observational equivalence via bisimulation in Coq

Cornell Department of Computer Science, Professor [Nate Foster's Lab](#)

Undergraduate Researcher

Ithaca, NY

Sep 2019 - May 2021

- Developed a synthesis algorithm that analyzes network switch configurations and operations
- Optimized above algorithm to scale its asymptotic performance from linear to near-constant (!)
- Revived a [formerly deprecated Z3 serializer](#), expanded its functionality, and improved its performance

PAPERS

[Avenir: Managing Data Plane Diversity via Control Plane Synthesis](#)

NSDI 2021

Eric Campbell, William T. Hallahan, **Priya Srikumar**, Carmelo Cascone, Jed Liu, Vignesh Ramamurthy, Hossein Hojjat, Ruzica Piskac, Robert Soulé, Nate Foster

SKILLS

Programming and Software

- OCaml, Coq, Java, Python, C, C++, L^AT_EX
- Git, Unix/Linux, Z3, CBMC