

# Siddhartha Prasad

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I am a researcher focused on helping people write programs that behave as they intend. My research interests are informed by my time as an engineer. I have written code that doesn't do what I want it to, and I want to spare everyone else the indignity.

## Education

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**Brown University**, Providence, RI  
PhD in Computer Science

Jan 2022 - Ongoing

**Tufts University**, Medford, MA  
Bachelor of Science in Computer Science and Mathematics

May 2016  
Summa cum Laude

## Employment

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### Apple

Seattle, WA

*Research Intern*

*Human-Centered Machine Learning team*

*May - Sept 2023*

Researcher on the team, exploring how AI and formal methods techniques can be used to support early childhood education.

### Microsoft

Redmond, WA

*Software Engineer II*

*Applied AI team*

*April 2018 - Sept 2021*

- Developer on the Azure Cognitive Services team, that allow for AI to easily be injected into apps, bots, and websites.
- Built a containerized framework that allowed AI models to be run portably across a variety of operating systems and architectures.

*Software Engineer*

*Developer Ecosystem team*

*Aug 2016 - March 2018*

- Developed APIs and features for XAML, a UI language used by developers to build Universal Windows apps.
- Designed XAML APIs for input modalities (keyboard, gamepad, ink), accessibility, and cross-platform language support.

*Intern*

*Developer Ecosystem team*

*May - Aug 2015*

### INRIA

*Intern*

*Parsifal team*

Saclay, France

*Jun - July 2014*

Research on correctness certificates for first order term-rewriting.

## Publications

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### Misconceptions in Finite-Trace and Infinite-Trace Linear Temporal Logic

Ben Greenman, **Siddhartha Prasad**, Antonio Di Stasio, Shufang Zhu, Giuseppe De Giacomo, Shriram Krishnamurthi, Marco Montali, Tim Nelson, Milda Zizyte

*International Symposium on Formal Methods (FM), 2024*

### ContextQ: Generated Questions to Support Meaningful Parent-Child Dialogue While Co-Reading

Griffin Dietz Smith, **Siddhartha Prasad**, Matt J Davidson, Leah Findlater, R Benjamin Shapiro

*Proceedings of the 23rd Annual ACM Interaction Design and Children Conference (IDC), 2024*

### Forge: A Tool and Language for Teaching Formal Methods

Tim Nelson, Ben Greenman, **Siddhartha Prasad**, Tristan Dyer, Ethan Bove, Qianfan Chen, Charles Cutting, Thomas Del Vecchio, Sidney LeVine, Julianne Rudner, Ben Ryjikov, Alexander Varga, Andrew Wagner, Luke West, Shriram Krishnamurthi

*ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages & Applications (OOPSLA), 2024*

### Generating Programs Trivially: Student Use of Large Language Models

**Siddhartha Prasad**, Ben Greenman, Tim Nelson, Shriram Krishnamurthi

*Proceedings of the ACM Conference on Global Computing Education (CompEd), 2023*

### Conceptual Mutation Testing for Student Programming Misconceptions

**Siddhartha Prasad**, Ben Greenman, Tim Nelson, Shriram Krishnamurthi

*The Art, Science, and Engineering of Programming, 2024*

**Making Hay from Wheats: A Classsourcing Method to Identify Misconceptions**

**Siddhartha Prasad**, Ben Greenman, Tim Nelson, John Wrenn, Shriram Krishnamurthi

*Koli Calling International Conference on Computing Education Research (Koli Calling), 2022*

**Large-Scale Intelligent Microservices**

Mark Hamilton, Nick Gonsalves, Christina Lee, Anand Raman, Brendan Walsh, **Siddhartha Prasad**, Dalitso Banda, Lucy Zhang, Lei Zhang, William T Freeman

*IEEE International Conference on Big Data, 2020*