

Siva Kamesh Somayyajula

✉ sks266@cornell.edu • 📧 ssomayyajula.github.io • 🌐 sivasomayyajula • 📍 ssomayyajula

Education

Carnegie Mellon University

Ph.D. in Pure and Applied Logic, School of Computer Science

Pittsburgh, PA

August 2018–

Coursework

◦ Foundations of Cyber-Physical Systems (15-824) ◦ TBA

Independent Coursework

◦ DeepSpec Summer School on Verified Systems '18 ◦ Oregon PL Summer School '18 on Parallelism & Concurrency

Cornell University

B.A. in Mathematics & Computer Science, College of Arts and Sciences

Ithaca, NY

August 2015–May 2018

Coursework

◦ Introduction to Constructive Type Theory (CS 6180) ◦ Advanced Programming Languages (CS 6110)
◦ Applied Logic (CS 4860) ◦ Programming Languages and Logics (CS 4110)

Thomas Jefferson High School for Science and Technology

Jefferson Diploma

Alexandria, VA

June 2011–June 2015

Experience

Carnegie Mellon University

Graduate Research Assistant, Department of Computer Science

Pittsburgh, PA

August 2018–

◦ Working on AFOSR's Assured Autonomy

Cornell University, Department of Computer Science

Teaching Assistant

Ithaca, NY

January–May 2018

◦ Worked for Prof. Robert Constable on Applied Logic (CS 4860)
◦ Course introduces various logics and their metatheory, type theory, and constructive mathematics
◦ Held office hours, give guest lectures, and grade assignments & exams

Course Consultant

August–December 2017

◦ Consulted for C++ Programming (CS 2024) taught by Ron DiNapoli
◦ Graded assignments and helped students on Piazza

Undergraduate Researcher

January 2016–May 2017

◦ Worked with a team of graduate students under Profs. Nate Foster & Dexter Kozen on the Frenetic Project
◦ Implemented a system for network program satisfaction up-to specification ([ssomayyajula/equiv](#))

Indiana University Bloomington

Undergraduate Research Assistant, Department of Mathematics

Bloomington, IN

June 2017–Dec 2017

◦ Worked with Prof. Amr Sabry on the Π reversible programming language in homotopy type theory
◦ Formalized various completeness results about Π and related homotopy-theoretic results in Agda ([ssomayyajula/HoTT](#))

Snowflake Computing

Engineering Intern

San Mateo, CA

June–August 2016

◦ Worked on the Snowflake data warehousing system's execution platform
◦ Implemented the redundant table/join elimination query optimization for its SQL compiler

U.S. Naval Research Laboratory

Intern, Software Engineering Section

Washington, D.C.

June–August 2014

◦ Worked on SecProve, an assertions-based formal verification tool for C
◦ Utilized techniques in verification condition generation to implement a prototype of SecProve

Skills

Technologies: Haskell, OCaml, Agda, Lean, Idris, Java (JSP, ANTLR, Google App Engine), Python, C (OpenMPI), C++, SQL

Software: Mathematica, L^AT_EX, Microsoft Office, Autodesk Inventor, TerrSet/IDRISI GIS

Languages: Spanish (professional working proficiency), Telugu (elementary proficiency)

Active Projects

refinery: a framework for embedding refinement logics into OCaml

cubism: excursions in cubical type theory