Chirag Bharadwaj

curriculum vitae

Department of Computer Science
Princeton University
⟨TBD⟩ Computer Science
35 Olden Street
Princeton, NJ 08540-5233

Birthdate: 23 November 1996
Citizenship: United States
Cell phone: **+1 609-937-6050**
Email: **chiragb@cs.princeton.edu**

Education

exp. 2019 **M.S.E. candidate in Computer Science** • Princeton University — Princeton, NJ, USA
Advisor: ⟨TBD⟩

2017 **B.Sc. in Computer Science** • Cornell University — Ithaca, NY, USA
Minor in Electrical and Computer Engineering
Thesis: Interactive λ-calculus for Learning
Advisor: Adrian Sampson

Honors and Awards

09/2017– **Princeton teaching assistantship** *for engineering graduate study*
05/2016, 05/2017 Outstanding teaching assistant
12/2015 Best final project in CS 3110
12/2014 Dean's list *in the College of Engineering*
05/2014 Outstanding achievement in chemistry
02/2014 New Jersey State VEX Robotics, Semifinalist

Research and Work Experience

09/2017– **Graduate Research Assistant**, Princeton University • *Princeton, NJ*
⟨TBD⟩

Undergraduate Research Assistant, Cornell University • *Ithaca, NY*

01/2017–05/2017 *"LambdaLab: Interactive λ-calculus for Learning"*
Laid out a theoretical foundation for an interactive visual tool that students could utilize to aid in learning the lambda calculus. Considered pedagogical value for multiple-intelligence learners.

08/2016–12/2016 *"Braid: Behaviorally-equivalent Intermediate Representation Generation"*
Generated intermediate representations equivalent in behavior to complex GPU programs, for use in a GPU-specific architecture that achieves better CPU/GPU separation than in current microarchitectures.

06/2016–08/2016 **Summer Analyst**, Goldman Sachs • *Jersey City, NJ*
Technology Infrastructure
Created a multithreaded, authenticated interface to protect against ad-hoc MySQL queries. Developed a RESTful API for the back-end using Dropwizard, Jackson, Jersey, JDBC, and Guava.

06/2015–08/2015 **Technology Operations Intern**, Bank of Tokyo-Mitsubishi Ltd. • *New York, NY*
Cloud Platforms
Used Salesforce technology to integrate legacy systems and provide CRM software in the cloud. Created demo scripts and sandbox environments for product demos to potential vendors in global market.

Papers

12/2016 S Somayyajula, C Bharadwaj. (2016) "Refined Logic: Implementing Constructive Logics with OCaml". *Cornell University, Department of Computer Science*. CS 4860: Applied Logic.

Teaching and Mentoring Experience

09/2017– **Graduate Teaching Assistant**, Princeton University • *Princeton, NJ*
⟨TBD⟩

01/2017–05/2017 **Mentor for Women in Computing at Cornell**, Cornell University • *Ithaca, NY*
Spring 2017 Co-advised three female underclassmen in computer science. Held group discussions about diversity, service and outreach, course selection, and technology internship experiences.

08/2016–12/2016 **Mentor for Computer Science Undergraduates**, Cornell University • *Ithaca, NY*
Fall 2016 Advised three undergraduate freshmen in computer science and general engineering. Provided meaningful experiences, helped students select courses, and involved students in club activities.

01/2015–05/2017 **Undergraduate Teaching Assistant**, Cornell University • *Ithaca, NY*
Spring 2015 to Spring 2017 Held weekly office hours, led recitation sections, participated in weekly grading sessions, created new lab assignments, held review sessions, proctored and graded exams, and answered questions on student discussion boards. Top contributor on Piazza. Served as a TA for *CS 2800: Discrete Structures*, *CS 3110: Functional Programming* (head TA), and *CS 3410: Computer Systems*.

Presentations

Talks

04/29/2017 Handy Techniques in Mathematics, *Cornell University, Ithaca, NY*
11/06/2016 Musical Groups: Exploring Music with Math, *Cornell University, Ithaca, NY*
04/23/2016 Special Polynomials, *Cornell University, Ithaca, NY*
10/24/2015 A Survey of Japanese Linguistics, *Cornell University, Ithaca, NY*
04/17/2015 Introduction to Complex Analysis, *Cornell University, Ithaca, NY*

Skills

High-level langs.	Java, OCaml, C, Python
Assembly langs.	CUDA, LLVM, ARM, MIPS, Verilog
Scripting langs.	bash, awk, sed, ruby
Web programming	HTML5, CSS, vanillaJS, MySQL, Bootstrap, Jekyll, Liquid, Dropwizard, Jackson, Jersey, JDBC, Guava
Tools and libraries	LaTeX, Eclipse, IntelliJ, Maven, Gradle, git, less, vim, valgrind, gdb, lex/yacc, flex/bison, gcc, clang
Spoken languages	**English** (native), **Kannada** (bilingual), **Spanish** (professional comp.)

Selected Coursework

Princeton University

- Distributed Systems (COS 418)
- Computational Geometry (COS 451)
- Advanced Algorithms* (COS 521)

Cornell University

- Electrical Circuits (ECE 2100)
- Digital Logic Design (ECE 2300)
- Embedded Systems (ECE 3140)
- Microelectronics (ECE 3150)
- Nuclear Science (ECE 4130)
- Unix and Scripting Tools (CS 2043)
- Honors Data Structures (CS 2112)
- Discrete Structures (CS 2800)
- Functional Programming (CS 3110)
- Computer Systems (CS 3410)
- Operating Systems (CS 4410)
- Artificial Intelligence (CS 4700)
- Mathematical Robotics (CS 4750)
- Machine Learning (CS 4780)
- Theory of Computation (CS 4810)
- Analysis of Algorithms (CS 4820)
- Applied Logic (CS 4860)
- Programming Languages* (CS 6110)