Chirag Bharadwaj

Curriculum Vitae

309 Eddy Street
Apartment 1D
Ithaca, NY 14850

(609)-937-6050
cb625@cornell.edu
chiragbharadwaj.com

DATE OF BIRTH: November 23, 1996. FLUSHING, NY, USA

Education

Cornell University Ithaca, NY
B.Sc. candidate in Computer Science, College of Engineering AUG 2014 – MAY 2017
Research interests: Programming Languages and Computer Architecture *(early graduation)*
GPA: 3.50/4.00 (expected through Fall 2016); current: 3.412/4.00

Research Experience

Undergraduate Research Assistant FALL 2016 – PRESENT
Department of Computer Science, Cornell University Advisor: Prof. Adrian Sampson

Designing Hardware-Software Programming Languages for Approximate Computing

- Project: Generating intermediate representations equivalent in behavior to complex integrated CPU/GPU programs.
- Applications: Creating a GPU-specific ISA that has language support for choosing between approximate and exact calculations as the cruciality of accuracy varies in target user applications.

Teaching Experience

Head Undergraduate Teaching Assistant AUG 2016 – PRESENT
Department of Computer Science, Cornell University Lecturer: Michael Clarkson
Course: *CS 3110: Functional Programming and Data Structures*
Tasks: Monitored office hours, co-led review sessions, and helped shape the course in addition to TA responsibilities.

Undergraduate Teaching Assistant AUG 2015 – MAY 2016
Department of Computer Science, Cornell University Lecturer: Anne Bracy
Course: *CS 3410: Computer Systems*
Tasks: Led weekly labs, created homework problems, and beta-tested exams in addition to consultant responsibilities.

Course Consultant DEC 2014 – MAY 2015
Department of Computer Science, Cornell University Lecturer: Siddhartha Chaudhuri
Course: *CS 2800: Discrete Structures*
Tasks: Held weekly office hours, graded weekly homeworks, and proctored/graded exams.

Employment

Goldman Sachs Jersey City, NJ
Role: Summer Analyst JUN 2016 – AUG 2016
Tasks: Co-developed administrative consoles for use in cloud platforms that protected against ad-hoc SQL in production; Created a RESTful API with a fully-integrated internal authentication system for the console back-end endpoints.

Bank of Tokyo-Mitsubishi UFJ New York, NY
Role: Technology Operations Intern JUN 2015 – AUG 2015
Tasks: Used Salesforce technology to integrate legacy systems and provide CRM software in the cloud; Created demo scripts and a sandbox environment for participation in SIT/UAT workflow.

Selected Coursework

Elective courses taken while matriculated at Cornell University.

Computer science:

- Honors Data Structures (CS 2112)
- Artificial Intelligence (CS 4700/4701, **spring 2017**)
- Mathematical Foundations of Robotics (CS 4750)
- Machine Learning (CS 4780, **spring 2017**)
- Introduction to Theory of Computation (CS 4810)
- Applied Logic (CS 4860)

Electrical engineering:

- Introduction to Circuits (ECE 2100)
- Digital Logic Design (ECE 2300)
- Embedded Systems (ECE 3140)
- Introduction to Nuclear Science (ECE 4130)

Graduate-level courses:

- Advanced Programming Languages (CS 6110)
- Decision Theory (CS 5846, **spring 2017**)
- Theory of Computation (CS 6810, **spring 2017**)
- Semiparametric Economics (ECON 7230, **spring 2017**)

Honors and Awards

- Outstanding teaching assistant in Computer Science — FALL 2015 – SPRING 2016
- Selected for best final project in CS 3110 — FALL 2015
- Dean's List in the College of Engineering — FALL 2014, FALL 2016 (expected)
- Outstanding Achievement in Chemistry — FALL 2014

Skills

Languages:
English (native), Kannada (bilingual), Spanish (professional), Japanese (rudimentary)

Programming/Scripting Languages:
Java, OCaml, C, Python, bash, CUDA (NVIDIA), Verilog, LLVM, MIPS, ARM

Software and Tools:
LaTeX2ε, Sublime Text, Eclipse, git, vim, valgrind, gdb, lex/yacc, flex/bison, gcc, clang

Activities and Interests

Activities:
Association of Computer Science Undergraduates, Cornell Piano Society, NY State Science Olympiad, Splash! at Cornell, Engineering Peer Advising, Orientation Leadership Committee

Personal interests:
Applied math, linguistics/formal systems, typography, cartography, teaching and learning, piano, running, badminton

Personal Projects

1. **Chirag Bharadwaj**, Peter Li. *Ro: A Functional-like Imperative Language for Modern Programming*. Ithaca, NY, 2016.
   - Current stages: Specification complete, examples developed. Early development on the lexer and parser occurring.
   - Initial development can be accessed at `https://github.com/chiragbharadwaj/ro`.

Citizenship

Citizen of the United States.