

# Chirag Bharadwaj

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## Education

### Cornell University, College of Engineering

*B.Sc. in Computer Science, GPA: 3.412/4.00*

**Concentration:** Programming Languages

**Activities:** Association of Computer Science Undergraduates, Institute of Electrical and Electronics Engineers, Cornell Piano Society, NY State Science Olympiad, Engineering Peer Advisor, Orientation Leader, Splash! at Cornell

#### Relevant Coursework:

- |                                   |                                    |  |
|-----------------------------------|------------------------------------|--|
| ◦ Electrical Circuits (ECE 2100)  | ◦ Honors Data Structures (CS 2112) | ◦ Programming Languages* (CS 6110)           |
| ◦ Digital Logic Design (ECE 2300) | ◦ Discrete Structures (CS 2800)    | ◦ Databases (CS 4320/4321)                   |
| ◦ Embedded Systems (ECE 3140)     | ◦ Functional Programming (CS 3110) | ◦ Applied Logic (CS 4860)                    |
| ◦ Computer Systems (CS 3410)      | ◦ Theory of Computation (CS 4810)  | ◦ Introduction to Nuclear Science (NSE 4130) |
| ◦ Operating Systems (CS 4410)     | ◦ Algorithm Analysis (CS 4820)     | <i>*indicates a graduate-level course</i>    |

**Ithaca, NY**

*August 2014 – May 2017*

## Experience

### Goldman Sachs

*Summer Analyst, Technology Infrastructure*

**Jersey City, NJ**

*June 2016 – August 2016*

- Worked with another intern to create an administrative console for use in cloud platforms
- Administrative console prevented ad-hoc MySQL queries from making data changes live in production by providing an interface
- Created a RESTful API for the back-end of the administrative console in Java using Dropwizard, Jackson, Jersey, JDBC, and Guava
- Created an authentication system and used a multithreaded connection pool with Guava's caches to query servers efficiently
- Wrote rigorous unit, performance, and integration tests for quality assurance to ensure ready-for-deployment status

### Bank of Tokyo-Mitsubishi UFJ

*Technology Operations Intern, IT Development*

**New York, NY**

*June 2015 – August 2015*

- Used Salesforce.com technology to integrate systems and provide customer relationship-management (CRM) software in the cloud
- Participated in SIT/UAT workflow to help integrate cloud services, met with developers on a weekly basis
- Developed demo script and sandbox environment for Salesforce product demos to potential vendors (e.g. lawyers) in global market
- Co-led group of five other interns to create technical wireframe and document requirements for ASP.NET non-production release form

### Department of Computer Science at Cornell University

*Undergraduate Teaching Assistant*

**Ithaca, NY**

*January 2015 – present*

- **CS 2800 (Consultant):** Spring 2015      **CS 3410 (TA):** Fall 2015, Spring 2016      **CS 3110 (Head TA):** Fall 2016
- Work 20 hours per week minimum: hold weekly office hours, lead a recitation section, participate in weekly grading sessions, create new assignments, proctor and grade exams, and answer questions on student discussion boards (top contributor on Piazza, all semesters)

## Relevant Skills

**Programming Languages:** Java, OCaml, C, Python, MIPS32, ARMv7, Verilog, bash

**Libraries and Frameworks:** lex, yacc, flex, Bison, JavaFX, Dropwizard, Jackson, Jersey, JDBC, Guava

**Web Development:** HTML5, CSS3, VanillaJS, Bootstrap, jQuery, MySQL

**Software and Tools:**  $\text{\LaTeX}$ , git, vim, valgrind, gdb, Microsoft Office, Sublime Text, Eclipse, IntelliJ, Gradle, Maven

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

## Awards and Accolades

- Outstanding teaching assistant in CS for 2015-2016
- Best final project for CS 3110 in Fall 2015
- **Dean's List:** Fall 2015, Spring 2015, Fall 2014
- Top 1% of graduating high school class
- Outstanding chemist 2014 (top 2/750)
- National Merit Finalist 2013, National AP Scholar 2012
- **SAT:** 2330 [2360] (730 [760] V, 800 M, 800 W, 12 E)

## Personal Interests

- Programming language/compiler development
- Distributed systems and low-level computation
- Physical chemistry, applied math, and nuclear science
- Linguistics, formal systems, and language acquisition
- Cartography and highway/metro transit design
- Teaching, learning, and the theory of self/meta
- Playing the piano and composing classical music

## Projects in the Works

- Compiler (source to x86) for *Ro*, a self-created functional language with language-level futures/threads
- *Fantaisie in D# Minor*, a classical-style musical composition for solo piano based on Scriabin/Chopin's free-form pieces