Chirag Bharadwaj

chiragb@cs.princeton.edu | +1 609-937-6050
chiragbharadwaj.com | chiragbharadwaj | chiragbharadwaj

EDUCATION

09/2017– **Princeton University**, Princeton, NJ
Master of Science, MSE, Computer Science GPA: 3.58/4.00

08/2014– **Cornell University**, Ithaca, NY
05/2017 *Bachelor of Science*, BSc, Computer Science
Minor: Electrical and Computer Engineering

INDUSTRY EXPERIENCE

06/2016– **The Goldman Sachs Group, Inc.**, Jersey City, NJ
08/2016 *Summer Analyst*, Technology Infrastructure
- Created and tested back-end of a RESTful API for MySQL queries in the cloud using Dropwizard, Jackson, Jersey, JDBC, Guava/Guice
- Created multithreaded authentication system with pools/streams

06/2015– **The Bank of Tokyo-Mitsubishi, Ltd.**, New York, NY
08/2015 *Technology Intern*, Salesforce Development
- Used Salesforce technology to integrate network's CRM software
- Developed sandbox environment and scripts for QA workflow

RESEARCH EXPERIENCE

12/2017– **Princeton University**, Princeton, NJ PI: Margaret Martonosi
09/2018 *Summer Research Assistant; Graduate Research Assistant*
- Estimated the performance of architectures in specialized hardware accelerators via (pre-RTL) C++/LLVM compiler analyses

08/2016– **Cornell University**, Ithaca, NY PI: Adrian Sampson
05/2017 *Undergraduate Research Assistant*
- Created LLVM emitter for CUDA programs to automate real-time acceleration of architectures with tandem CPU/GPU control

PUBLICATIONS

Theses and Dissertations

1. **C Bharadwaj**. *LambdaLab: Interactive λ-calculus for Learning*. Cornell University.

Non-archival Proceedings

1. **C Bharadwaj**, TJ Ham, O Matthews, JL Aragon, MR Martonosi. *Pythia: Measuring the Acceleratability of Specialized Accelerators*. SRC TECHCON, 09/2018.
2. **C Bharadwaj**, SD Gore. *Reddit Comments via Generative Grammar Modelling*. Cornell University archives, 05/2017.
3. SK Somayyajula, **C Bharadwaj**. *Refinery: Implementing Constructive Logics in OCaml*. Cornell University archives, 12/2016.

AWARDS AND ACCOLADES

1. Teaching assistantship for graduate engineering studies 09/2017
2. Outstanding teaching assistant in Computer Science 05/2017, 05/2016
3. Best final project in CS 3110: Functional Programming 12/2015
4. Dean's List in the College of Engineering 12/2014
5. Outstanding achievement in chemistry (rank 2/747) 06/2014

RESEARCH INTERESTS

functional programming, algebras, semantics, compilers, microarchitectures, accelerators

Citizenship

United States of America

Languages

English • Spanish • Mandarin

TECHNICAL SKILLS

Programming and Scripting

C++, C, Java, Kotlin, OCaml
Python, Ruby, BASH, awk, sed

Verification and Solvers

Coq, NuPRL, SystemVerilog

Web Development

HTML5, CSS/SASS, JavaScript
Dropwizard, JDBC, SQL, Guice
Jekyll, Ruhoh, Nanoc

Hardware, Assembly, ISAs

CUDA, LLVM, ARM, MIPS, RISCV
Verilog, Quartus, ModelSim
GTKWave, SPICE, Cadence

Tools and Libraries

LaTeX, Markdown
Eclipse, IntelliJ, CLion, vim
CMake, Makefile, Ninja, Gradle
Git, Subversion, Mercurial
GDB, valgrind, gprof
Lex, YACC, Flex, Bison

PROJECTS

Pre-RTL HW accelerator tools
Manycore victim caches in RTL
Functional language compiler
Reddit comment generator

ACADEMIC TEACHING (TA)

Digital Logic Design	(× 1)
Computer Organization	(× 4)
Functional Programming	(× 2)
Discrete Mathematics	(× 1)

ACTIVITIES

Princeton University

Asian-American Students' Assn.
Graduate Engineering Council
Splash! at Princeton
NJ State Science Olympiad

Cornell University

Women and URMs in Computing
Association of CS Undergraduates
Freshman Orientation Leadership
Engineering Peer Advising
Splash! at Cornell
NY State Science Olympiad
Cornell Piano Society