

Isaac Struhl

(781) 697-7145 | istruhl@college.harvard.edu | 228 Fellsway, Somerville, MA 02145

EDUCATION

Harvard University

A.B. Physics, S.M. Computer Science

Cambridge, Massachusetts

Expected May 2022

- GPA: 3.91/4
- John Harvard Scholar
- Relevant Coursework: Physics 210: General Relativity; CS 281: Advanced Machine Learning, CS 263: Computer and Network Security; CS 124: Data Structures and Algorithms; CS 161: Operating Systems; CS 61: Systems Programming and Machine Organization

LEADERSHIP

Harvard College Consulting Group

Vice-Director of Operations

Cambridge, Massachusetts

Feb 2018 – May 2020

- Directed operations for the 122-member fully student-run consulting group with ~\$800k annual revenue from 36 client engagements each year including Microsoft, Snapchat, GE, Intel, NBC, Pepsi, Reebok, and Louis Vuitton
- Led new diversity and outreach initiatives; increased diverse application pool by over 100% since the previous cycle
- Personally developed and implemented an overhaul of the internal feedback system, leading to a major increase in quality, frequency, and actionability of feedback items
- Led a case of 6 people on an internal sales strategy case for a large sports and entertainment company during Spring 2019

Harvard University

Teaching Fellow

Cambridge, Massachusetts

May 2018 – Dec 2019

- Led a section of ~40 students in CS 61 (Systems Programming); ~25 students in CS 50 (Intro to Computer Science)
- Taught a variety of topics across both classes, including programming concepts, systems, algorithms, and theory
- Received the Derek Bok Center Certificate of Distinction in Teaching for both CS 61 and CS 50

EXPERIENCE

Distributed Spectrum

Co-founder

Somerville, Massachusetts

Aug 2020 – Present

- Working with two other on-leave Harvard students on a distributed radio frequency monitoring startup. Applications include interference detection and localization at industrial sites, rapid threat-level analysis for national defense, and distributed spectrum analytics for a variety of radio-dependent systems
- Built hardware prototypes and designed a low-level scheduling algorithm for the data collection pipeline
- Phase 1 NSF small-business grant pitch accepted; proposal pending review

PRISE – Harvard University

Research Fellow

Cambridge, Massachusetts

May 2020 – Sept 2020

- Worked with Prof. James Mickens to develop hardware security guarantees for remote machines without relying on trust of the underlying operating system or trust in the control flow of privileged code. The idea is to create an isolated module that can inspect the pipeline of the top-half code and run policy checks (e.g. enforcing CFI, dynamic type checking) without needing those checks to be inserted directly into the top-half code, which is a security risk

Google

Software Engineering Intern

Sunnyvale, California

May 2019 – Aug 2019

- Designed and implemented a new autocomplete service for profiles, for use in products across Google, including Gmail, Photos, and YouTube
- Created an integration testing tool for this service; received a spot bonus for this work
- Decreased average latency of this service by 28%

Gordon Lab – Broad Institute

Research Intern

Cambridge, Massachusetts

Jun 2017 – Aug 2017

- Applied deep learning techniques to synthetic biology
- Designed and tested various machine learning architectures using Keras/Tensorflow to classify promoters by origin species; achieved 87% accuracy on the test set, greatly exceeding the 63% benchmark in the DARPA project scope

SKILLS & INTERESTS

Skills: Research, Teaching, Management Consulting, Leadership

Technical Skills: Languages: C++/C, Python, JavaScript; ML: Keras/Tensorflow, PyTorch

Interests: Computer Science Education, Music Composition, Rowing, Ultimate Frisbee

Github: <https://github.com/iostruhl>