

# Karun Singh

CORNELL UNIVERSITY 2018 · COMPUTER SCIENCE

409 Oak Avenue, Unit 1, Ithaca NY - 14850

☎ (+1) 646-599-1394 | ✉ karun.singh17@gmail.com | 🏠 www.karun.in | 📷 karunsingh | 📺 karun17

## Education

### Cornell University

Ithaca, New York

B.Sc. IN COMPUTER SCIENCE, COLLEGE OF ENGINEERING

August 2014 - May 2018 (expected)

- Dean's List, all semesters so far (current GPA: 4.059).

## Experience

### Snap Inc.

Los Angeles, California

SOFTWARE ENGINEERING INTERN

Summer 2017

- Summer intern on the Camera Platform team, which powers Snapchat's augmented reality 'filters'.
- Worked on open-ended, research-based tasks in the domain of computer vision, with a focus on deployment constraints.
- Helped design and build the early versions of new backend infrastructure required by the Snapchat app.

### Google

San Francisco, California

SOFTWARE ENGINEERING INTERN

Summer 2016

- Built and demoed a project that integrates Google Wallet's functionality into other customer-facing Google services.

### Undergraduate Research

Cornell University

INDEPENDENT RESEARCH PROJECTS

Aug 2017 - PRESENT

- Proposed and evaluated techniques to reduce the training cost of data augmentations for neural networks. [Paper at [www.karun.in](http://www.karun.in)]
- Used convolutional neural networks to visualize the process of pre-mRNA splicing in DNA transcription. [Write-up at [www.karun.in](http://www.karun.in)]
- Currently exploring unsupervised learning algorithms for image classification, supervised by Professor Bharath Hariharan.

### Teaching Assistant

Cornell University

UNDERGRADUATE TA IN THE CS AND ECE DEPARTMENTS

Jan 2016 - PRESENT

- TA for CS 4820: Introduction to Analysis of Algorithms twice, under Professors Éva Tardos and Robert Kleinberg.
- Previously a TA for CS 4320: Introduction to Database Systems, and ECE 2300: Digital Logic and Computer Organization.

## Projects and Activities

### Cornell Design & Tech Initiative

Cornell University

TEAM CO-LEAD; PRODUCT MANAGER

Aug 2017 - PRESENT

- Co-leading an interdisciplinary team of 52 students that creates technology to address needs on and around Cornell's campus.
- Product Manager for a sub-team of 7 that is building an online queueing solution for overcrowded TA office hours.

### Resistance Racing

Cornell University

ELECTRICAL TEAM

Feb 2016 - PRESENT

- Building a real-time telemetry system for the team's energy-efficient electric vehicle, which will compete in the Shell Eco Marathon.
- Previously built a Raspberry Pi-based dashboard and logging system, which was mounted on the team's all-electric motorcycle.

### Hackathons

ACTIVE PARTICIPANT AT COLLEGIATE HACKATHONS

Mar 2015 - PRESENT

- Developed an automatic neighborhood ranking website for Philadelphia backed by open datasets, at PennApps 2015.
- Created Scavenger, a real-time team-based scavenger hunt game based on image classification, at HackNY 2016.

## Skills

### Languages & Technologies

Java, Python, TensorFlow, Keras, SciPy, C++, Node.js, JavaScript, SQL, Go, PHP, OCaml, C, HTML, CSS

### Theoretical Coursework

Analysis of Algorithms, Cryptography, Functional Programming, Applied Logic, Number Theory

### High-level Applications

Machine Learning, Computer Vision, Computational Genetics, Artificial Intelligence, Computer Graphics

### Low-level Applications

Operating Systems, Database Systems, Embedded Systems, Digital Logic and Computer Organization

### Other

Politics and Sports, Astronomy, Human Perception, Microeconomics, Computing in the Arts, Juggling