Karun Singh

CORNELL UNIVERSITY 2018 · COMPUTER SCIENCE

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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]
- Used convolutional neural networks to visualize the process of pre-mRNA splicing in DNA transcription. [Write-up at 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