

Satvik Shukla

INCOMING DEEP LEARNING INTERN (SPRING '19), METALAB @ HARVARD

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Education

University of Washington (UW)

Seattle, WA

B.S. IN COMPUTER SCIENCE

Expected Graduation: Dec. 2019

- GPA: 3.81 | Minors: Applied Math and Mathematics | Study Abroad: London, UK (Summer 2017)

Skills

Data Python (pyTorch, keras, numpy, scikit-learn, pandas, matplotlib), R, MATLAB

Languages Java, C, C++

Database SQL (SQL Server, SQLite, MySQL), NoSQL, Spark

Miscellaneous Azure, AWS, GCP, Unix/Linux, Tableau, LaTeX, Gitlab CI

Projects

Data Constrained classification using Residual Networks

PYTHON, KERAS, PANDAS

- Developed a novel training approach to deal with classification problems in data constrained environments (~100 samples per class).
- Achieved **4x** improvement in validation accuracy over vanilla transfer learning by using greedy training, auxiliary loss, and elastic loss regularizer.
- Poster available for review at: <http://bit.ly/satvik-dccrn>

The Airbnb Revolution

PYTHON, XG BOOST, SCIKIT-LEARN (ADABOOST, LOGISTIC REGRESSION, MLP, AND MORE), NUMPY, PANDAS

- Developed evaluations and wrote a paper to perform **imbalanced learning** on Airbnb's Dataset and predict the country of booking for a new user.
- Paper available for review at: <http://bit.ly/satvik-ar>

Trusted Receivables

PYTHON, OPENCV, SCIKIT-IMAGE, MICROSOFT COGNITIVE SERVICES (COMPUTER VISION), TWILIO API | DUBHACKS 2018

- Developed a tool to curtail the rise of stolen packages from the porch of residential buildings/apartments using security camera feed.
- Used **Object Detection** to generate tags for each frame of input through **Cognitive Services** and inform user of suspicious activities using Twilio.

Experience

Allen School, University of Washington

Jan. 2019 - PRESENT

DEEP LEARNING RESEARCH ASSISTANT | MENTORS: JOSEPH REDMON, ALI FARHADI

- Explore the applications of **Zero Shot Learning** to novel fields and tackle ways of improving existing performance metrics.
- Attend weekly **reading groups** to discuss papers concerning latest discoveries and novel applications in Deep Learning.

Allen School, University of Washington

Jan. 2019 - PRESENT

TEACHING ASSISTANT | FOUNDATIONS OF COMPUTING II

- Lead a discussion section for **30 students** every week, hold office hours, and grade weekly assignments/examinations.

Engineering Academic Center, University of Washington

Apr. 2018 - PRESENT

MATHEMATICS INSTRUCTOR

- Develop and deliver approximately **3 hours** of instruction per week to students in **Differential Equations** and **Linear Algebra**.

Berkman Klein Center, Harvard University

Jun. 2018 - Aug. 2018

RESEARCH INTERN | PYTHON (KERAS, PANDAS, NUMPY, FLASK), AMAZON ELASTIC BEANSTALK, JAVASCRIPT

- Developed a Neural Network in **keras** based off ResNet-50 to infer identity of artists from user-input photographs achieving **40%** accuracy.
- Deployed the final model on **Amazon Web Services** using **Flask** and presented it to an audience of over **70 academics**.
- Available for exploration at: <https://bit.ly/satvik-curate>

def hacks()

Mar. 2017 - Oct. 2018

HEAD ORGANIZER

- Coordinated all logistics for the 24-hour event, including workshops and mentorships, to effectively organize hackathon with over **150 attendees**.