Yash Savani

Ph.D. Candidate, Computer Science, Carnegie Mellon University

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Professional Statement

I am a research scientist, mathematician, and engineer with a passion for exploration and learning. The pervasive puzzles and patterns of our interconnected lives fascinate me, and I aspire to exercise my repertoire of math, computation, and collaboration skills to solve those puzzles with the highest positive societal impact. My current research interests include statistical learning theory, optimization theory, and deep learning.

Education

Carnegie Mellon University, Pittsburgh, PA
Ph.D. Computer Science (GPA 0.00 / 0.00) — Aug 2021 - Current

Stanford University, Palo Alto, CA
M.S. Statistics (GPA 3.77 / 4.00) — Mar 2015 - Jun 2017
B.S. Computer Science (GPA 3.54 / 4.00) — Sep 2013 - Jun 2017

Experience

Research Scientist
May 2020 - May 2021
Abacus.AI, San Francisco, CA
I performed research in the AutoML / NAS and Fairness in ML domains. We wrote five papers based on this work.

Machine Learning Engineer
Apr 2019 - May 2020
Abacus.AI, San Francisco, CA
I designed and implemented scalable deep learning architectures including LSTM forecasting models, AutoML / NAS regression and classification models, GAN data augmentation models, and VAE anomaly detection models among others.

Machine Learning Engineer
Aug 2017 - Dec 2018
Primer Technologies, Inc., San Francisco , CA
I worked on improving contemporary statistical learning and applied graph theory models for natural language applications. The machine intelligence algorithms I developed help decipher global news data.

Research Intern
Jul 2015 - Sep 2015
Andrew Ng's Artificial Intelligence Lab, Stanford University, CA
I worked on the system infrastructure and CUDA code for a hybrid CNN and LSTM architecture designed to instantly detect and semantically segment images and videos with multiple stimuli.

Cofounder (CTO)
Jul 2014 - Dec 2015
Ebotic, Palo Alto, CA
I worked with an international team to develop an intelligent drone platform that applied advanced flight technologies, SLAM, and deep learning for improved flight stability and awareness.

Research Intern
Jun 2014 - Aug 2014
Sebastian Thrun's Artificial Intelligence Lab, Stanford University, CA
I improved the performance of machine learning algorithms for smart home applications by adding thermal image descriptors into a robotics pipeline.

Skills

Computer Languages — **Python**, Julia, C / C++, CUDA, Javascript, R, Java, MATLAB, Racket, Haskell, LaTeX, SQL, NoSQL, and HTML5 / CSS3.

Frameworks / Tools — **PyTorch**, TensorFlow, **NumPy**, **Matplotlib**, **Jupyter**, SpaCy, Nltk, AllenNLP, **Linux**, AWS, GCP, Docker, **Git**, React, Redux, Webpack, Flask, **Visual Studio Code**, **Vim**, Blender, Photoshop, and Figma.

Other Interests — Analysis, algebra, topology, incentive theory, economics, cognitive science, neuroscience, videography, scuba diving, rock climbing, and fitness.

Conference Publications

Exploring the Loss Landscape in Neural Architecture Search.
C. White, S. Nolen, Y. Savani.
Conference on Uncertainty in Artificial Intelligence (UAI). PMLR, 2021.

BANANAS: Bayesian Optimization with Neural Architectures for Neural Architecture Search.
C. White, W. Neiswanger, Y. Savani.
Proceedings of the AAAI Conference on Artificial Intelligence (AAAI) 2021.

Intra-Processing Methods for Debiasing Neural Networks.
Y. Savani, C. White, and N. S. Govindarajulu.
Advances in Neural Information Processing Systems (NeurIPS) 2020.

A Study on Encodings for Neural Architecture Search.
C. White, W. Neiswanger, S. Nolen, Y. Savani.
Selected for Spotlight Presentation
Advances in Neural Information Processing Systems (NeurIPS) 2020.

Workshop Publications

A Study on Encodings for Neural Architecture Search.
C. White, W. Neiswanger, S. Nolen, Y. Savani.
ICML Workshop on AutoML, 2020.

Local Search is State of the Art for Neural Architecture Search Benchmarks.
C. White, S. Nolen, Y. Savani.
ICML Workshop on AutoML, 2020.

Neural Architecture Search via Bayesian Optimization with a Neural Network Prior.
C. White, W. Neiswanger, Y. Savani.
NeurIPS Workshop on Meta Learning, 2019.

Deep Uncertainty Estimation for Model-based Neural Architecture Search.
C. White, W. Neiswanger, Y. Savani.
NeurIPS Workshop on Bayesian Deep Learning, 2019.

Talks

NeurIPS 2020 Short Presentation Oct 2020	Intra-Processing Methods for Debiasing Neural Networks. https://www.youtube.com/watch?v=PcCj91K7jO0
Abacus.AI Workshop Aug 2020	Explainability and bias in Neural Nets. https://www.youtube.com/watch?v=0PO6DgQe_9M
AICamp Workshop May 2020	Unsupervised Learning & Deep Learning Based Forecasting. https://www.youtube.com/watch?v=RcoW1KxXezE
Abacus.AI Talk Feb 2020	Anomaly Detection. https://www.youtube.com/watch?v=jDjwY9bB7Ec
Abacus.AI Talk Aug 2019	XLNET: The State-of-the-Art in Language Models. https://www.youtube.com/watch?v=jh81xHY6uBw