Chris Ying

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Education

Carnegie Mellon University (MLD)
MS in Machine Learning
Advisor: Katerina Fragkiadaki
Aug 2016 - May 2017

Carnegie Mellon University (SCS)
BS in Computer Science
Minor in Machine Learning
Aug 2013 - May 2016
Cumulative GPA: 3.98/4.00

Skills

Languages:
Python, C/C++, Java, Go, MATLAB/Octave, SML, LaTeX, SQL, Javascript, HQ9+

Research:
Machine perception, Evolutionary algorithms, Neural architecture search, Large-scale distributed deep learning

Interests:
Meta-learning, Multitask-learning, Distributed systems, ML for climate change

Miscellaneous

2016 | SWE Intern @ Dropbox
2015 | SWE Intern @ Google
2014 | SWE Intern @ Google Seattle

2017 | President of ACM@CMU
2016 | VP of ACM@CMU
2016 | TA for CMU 15-451
2015 | TA for CMU 15-210
2016 | Lead of AWAP competition
2015 | Director of HackCMU
2013 | Valedictorian of CHS

Work Experience

2019 - now
Ambient AI | Applied Research Scientist
Palo Alto, CA

- Applied state-of-the-art research techniques in object detection, classification, pose, activity recognition, and segmentation to detect threats in real-time on security cameras.
- Built tooling and managed a data ops team to scalably collect new data for continuous training and evaluation.
- Employee #7, joined at early Series A, current company size is 20+, closely involved with hiring for and managing the Machine Perception team.

2017 - 2019
Google Brain | Research Software Engineer
Mountain View, CA

- Studied open-ended research problems in deep learning, including large-batch training, neural architecture search, and evolutionary algorithms (see Publications).
- Designed and built flexible infrastructure for performing datacenter-scale research in genetic algorithms.
- Contributed to TensorFlow and public beta launch of Tensor Processing Units (TPUs) to Google Cloud.

Publications

Chris Ying, Aaron Klein, Esteban Real, Eric Christiansen, Kevin Murphy, Frank Hutter. NAS-Bench-101: Towards Reproducible Architecture Search. In *ICML 2019* (oral). 2019. https://arxiv.org/abs/1902.09635

Chris Ying, Sameer Kumar, Dehao Chen, Tao Wang, Youlong Cheng. Image Classification at Supercomputer Scale. In *Systems for ML @ NeurIPS 2018*. 2018. https://arxiv.org/abs/1811.06992.

Yang You, Jonathan Hseu, Chris Ying, James Demmel, Kurt Keutzer, Cho-Jui Hsieh. Large-Batch Training for LSTM and Beyond. 2019. https://arxiv.org/abs/1901.08256.

Samuel L. Smith, Pieter-Jan Kindermans, Chris Ying, Quoc V. Le. Don't Decay the Learning Rate, Increase the Batch Size. In *ICLR 2018*. 2018. https://arxiv.org/abs/1711.00489.

Chris Ying, Katerina Fragkiadaki. Depth-Adaptive Computational Policies for Efficient Visual Tracking. In *EMMCVPR 2017*. 2017. https://arxiv.org/abs/1801.00508.

Chris Ying. Enumerating Unique Computational Graphs via an Iterative Graph Invariant. *Tech report*. 2019. https://arxiv.org/abs/1902.06192.

Other Projects

2016 **ParaBDD: Parallel Binary Decision Diagrams for Efficient Model Checking**
Built a parallel binary decision diagram library for model checking which efficiently utilizes Intel Xeon Phi processors using Intel CilkPlus and lockfree hash tables.

2016 **Improving Event Co-reference using Knowledge Bases**
Conducted NLP research in coreference and designed a system that utilizes prior knowledge in the form of knowledge bases (i.e., NELL, YAGO, DBpedia) and logistic regression to perform pairwise event coreference.