

# Chris Ying



contact@chrisying.net



+1 (408) 513 - 5636



github.com/chrisying



linkedin.com/in/ying-chris

## Education

Carnegie Mellon University  
M.S. in Machine Learning  
Advisor: Katerina Fragkiadaki  
Aug 2016 - May 2017

Carnegie Mellon University  
B.S. 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:

Computer vision, Evolutionary  
algorithms, Neural architecture  
search, Large-scale distributed deep  
learning

Notable Tech:

PyTorch, TensorFlow, Docker, Linux,  
Django, PostgreSQL, GraphQL, Bazel

## 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 | Lead of AWAP competition  
2016 | TA for CMU 15-451  
2015 | TA for CMU 15-210  
2015 | Director of HackCMU  
2013 | Valedictorian of CHS

## Work Experience

**Ambient AI | Staff Research Scientist / Tech Lead** 2019 - present

- Utilized object detection, visual tracking, image classification, pose estimation, activity recognition, and re-identification to detect threats in on security cameras.
- Developed hybrid on-premise + cloud infrastructure for privacy-aware real-time video processing.
- Built tooling and managed a data-ops team to scalably collect new data for continuous training and evaluation.
- Joined as employee #7 early Series A, current company size is 80+, founder and tech lead of Machine Perception organization, hiring manager for Research Scientist role.

**Google Brain | Research Software Engineer** 2017 - 2019

- Studied open-ended research problems in deep learning, including large-batch training, neural architecture search, and evolutionary algorithms.
- 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 / Projects

Chris Ying, Aaron Klein, Esteban Real, Eric Christiansen, Kevin Murphy, Frank Hutter. **NAS-Bench-101: Towards Reproducible Architecture Search**. In *ICML* (oral). 2019. [arxiv.org/abs/1902.09635](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. [arxiv.org/abs/1811.06992](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**. *Preprint*. 2019. [arxiv.org/abs/1901.08256](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. [arxiv.org/abs/1711.00489](https://arxiv.org/abs/1711.00489).

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

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

Chris Ying, Matt Bryant. **ParaBDD: Parallel Binary Decision Diagrams for Efficient Model Checking**. 2016. [chrisying.net/parabdd](https://chrisying.net/parabdd)

Chris Ying, Bishan Yang. **Improving Event Coreference using Knowledge Bases**. 2016. [chrisying.net/static/coref-poster.pdf](https://chrisying.net/static/coref-poster.pdf)