

Christopher Fifty

Education

- 2018–2018 MEng, Computer Science, *Cornell University*, Ithaca, NY, GPA: 4.02.
Research: Graph Neural Networks under Kilian Weinberger.
- 2014–2018 BA, Computer Science, *Cornell University*, Ithaca, NY, GPA: 3.94.
External Specialization: Mathematics. Previous a pre-med/biological engineering major.

Experience

- 2019–Present Research Engineer, *Google Brain*, Mountain View, CA.
○ Theoretical research in transfer learning, multi-task learning, and deep learning optimization.
○ Applied research in multi-modal (video, audio, text) modeling.
- 2018–2019 Machine Learning Engineer, *YouTube*, Mountain View, Ca.
○ Machine learning algorithmic improvements to YouTube Algorithm(s).
○ 5-figure spot bonus from YouTube CTO for “outstanding, above-and-beyond contributions to YouTube”.
○ Generated an estimated 8-figures in ad revenue from 8 machine learning launches over the course of 11 months.
- Winter 2018 Research Intern, *ASAPP*, Ithaca, NY.
○ NLP intent disambiguation for call center dialogue systems.
○ First employee in the ASAPP Ithaca extension directed by Kilian Weinberger.

Talks

- October 2021 I gave a talk to Level 5 (formerly Lyft’s self-driving division, now part of Toyota’s) regarding multi-task learning for autonomous vehicles.
- March 2021 I was invited by Waymo Research to give a talk on information transfer in multi-task learning systems.

Selected Publications

- NeurIPS 2021 Efficiently Identifying Task Groupings for Multi-Task Learning.
Spotlight Christopher Fifty, Ehsan Amid, Zhe Zhao, Rohan Anil, Chelsea Finn.
- ICML 2020 Step-Size Adaptation Using Exponentiated Gradient Updates.
Spotlight *Beyond First Order Methods in Machine Learning Systems Workshop*
Ehsan Amid, Rohan Anil, Christopher Fifty, Manfred K Warmuth
- ICML 2019 Simplifying Graph Convolutional Networks.
Felix Wu, Amauri Souza, Tianyi Zhang, Christopher Fifty, Tao Yu, Kilian Weinberger

Projects

- 2018–Present *imagineart.ai*.
○ I founded <https://imagineart.ai>, an eCommerce website that transforms any picture into a work of art using machine learning and gives our users the opportunity to buy this art as a canvas.
○ Built the deep learning server from the ground up, hosted it from my bedroom, wrote a novel Neural Style Transfer algorithm to reduce runtime from 60s to 10s, hired a web designer, threw up a Firebase webserver, negotiated contracts with canvas distributors, executed a Facebook/Instagram ad campaign, etc.
○ The logic of a user going from their first stylization to the canvas arriving at their doorstep is fully automated.
○ Invited to the final round of YC interviews as a solo founder (6% of all applicants).
- 2018–Present Machine Learning YouTube Content Creator.
○ I create educational machine learning content about TensorFlow, hardware, and Natural Language Processing.
○ My channel has around 75 subscribers, over 10,000 views, and around 330 hours of watch time.

Community Contributions

- 2021 Peer reviewer for NeurIPS (**Outstanding Reviewer Award**), ICML, and ICLR conferences.
- 2018 Teaching assistant for CS 5740/4750 (Cornell), Natural Language Processing, taught by Claire Cardie.
- 2017 Teaching assistant for CS 4820 (Cornell), Introduction to Analysis of Algorithms, taught by Eva Tardos.