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, 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.

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