New York City
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# Marc Finzi

## Education

2019 - Now **Ph.D. Candidate in Computer Science**, *NYU Courant*, NYC
Supervised by Andrew Gordon Wilson

2017 - 2019 **Ph.D. Student**, *Cornell*, Ithaca, NY
Supervised by Andrew Gordon Wilson, obtained masters in Operations Research and transferred to NYU

2013 - 2017 **B.S. Physics**, *Harvey Mudd College*, Claremont, CA, GPA: 3.7

## Experience

Summer 2021 **Deep Learning Research Intern at NVIDIA**, *Lidar Perception*
- Improving object detection from Lidar point clouds

Summer 2020 **Research Intern at Qualcomm**, *with Max Welling*
- Developed probabilistic numeric convolutional neural networks,culminating in a patent application and ICLR2021 paper

Summer 2019 **Applied Scientist intern at Amazon**
- Applying deep learning methods for ranking and recommendation

2015 - 2017 **Undergraduate Thesis in Physics**, *Tom Donnelly's lab*, Harvey Mudd College
- Led three-man HMC team at UT Austin to conduct laser physics experiment

Summers 2014, 2015 **Applied Physics Intern at NASA**, *Alexander Kutyrev's lab*, NASA Goddard Space Flight Center
- Embedded systems programming, analogue and digital circuit design, PCB design, computer vision

## Technical Skills

Relevant Coursework: Advanced Machine Learning Systems, Computer Vision, Bayesian Machine Learning, Topics in ML optimization, Numerical Analysis for Data Science, Approximate Dynamic Programming, Algorithms, Stochastic Processes

Fluency: PyTorch, Jax, Python, C++, LaTeX

## Publications

ICLR 2022 **Deconstructing the Inductive Biases of Hamiltonian Neural Networks**
Nate Gruver, **Marc Finzi**, Samuel Stanton, Andrew Gordon Wilson

NeurIPS 2021 **Residual Pathway Priors for Soft Equivariance Constraints**
**Marc Finzi***, Greg Benton*, Andrew Gordon Wilson

ICML 2021 **A Practical Method for Constructing Equivariant Multilayer Perceptrons for Arbitrary Matrix Groups**
**Marc Finzi**, Max Welling, Andrew Gordon Wilson

ICML 2021 **SKIing on Simplices: Kernel Interpolation on the Permutohedral Lattice for Scalable Gaussian Processes**
Sanyaam Kapoor*, **Marc Finzi***, Ke Alexander Wang, Andrew Gordon Wilson

ICLR 2021 **Probabilistic Numeric Convolutional Neural Networks**
**Marc Finzi**, Roberto Bondesan, Max Welling

NeurIPS 2020 **Simplifying Hamiltonian and Lagrangian Neural Networks via Explicit Constraints**
**Marc Finzi***, Ke Alexander Wang*, Andrew Gordon Wilson

NeurIPS 2020 **Learning Invariances in Neural Networks from Training Data**
Greg Benton, **Marc Finzi**, Pavel Izmailov, Andrew Gordon Wilson

ICML 2020 **Generalizing Convolutional Neural Networks for Equivariance to Lie Groups on Arbitrary Continuous Data**
**Marc Finzi**, Samuel Stanton, Pavel Izmailov, Andrew Gordon Wilson

ICML 2020 **Semi-Supervised Learning with Normalizing Flows**
Pavel Izmailov, Polina Kirichenko, **Marc Finzi**, Andrew Gordon Wilson

ICLR 2019 **There Are Many Consistent Explanations of Unlabeled Data: Why You Should Average**
Ben Athiwaratkun, **Marc Finzi**, Pavel Izmailov, Andrew Gordon Wilson

## Awards

2021 **Jacob T. Schwartz Fellowship**
Awarded for outstanding research performance in the PhD program