

Education

- 2020–Present **PhD, Computer Science**, *Stanford University*, Stanford, CA, GPA: 4.0.
Advisor: Emily B. Fox, Carlos Guestrin. Expertise: time series, health, state-space models, representation learning
- 2018–2020 **MS, Computer Science**, *Cornell University*, Ithaca, NY, GPA: 4.0.
Major advisor: Andrew Gordon Wilson (Computer Science), Minor advisor: Robert Kleinberg (Applied Math)
Expertise: Bayesian machine learning, reinforcement learning, numerical linear algebra, kernel methods
- 2014–2018 **BA, Computer Science, Math, Physics**, *Cornell University*, Ithaca, NY, GPA: 3.9.
Expertise: experimental atomic physics, optics

Awards and Fellowships

- 2022 Stanford Data Science Scholar, \$60,000 support over two years
- 2019 1st place team at the Cornell Data Open data science competition hosted by Citadel, \$20,000 prize

Experience

- Summer 2021 **Applied Research Scientist Intern, Forecasting**, *Amazon AWS AI*, Palo Alto, CA.
 - o Developed a novel method for time series forecasting on graphs using graph neural networks
 - o Implemented GPU-accelerated temporal point processes to model discrete event time series
- 2018–2020 **Head Teaching Assistant, Algorithms**, *Cornell University*, Ithaca, NY.
 - o Managed course staff of 30⁺ teaching assistants for CS 4820: Introduction to Analysis of Algorithms.
 - o Designed homework problems and held office hours on greedy algorithms, divide-and-conquer, DP, etc.
- 2018–2019 **Open Source Developer**, *GPyTorch (used at Facebook and Uber)*, 2,900⁺ stars on GitHub.
 - o A top contributor the most-starred package for scalable Gaussian processes on GitHub
 - o Increased regression model throughput by 100x, scaling to 1M⁺ datapoints
 - o Implemented custom PyTorch code for popular kernel computations, reducing memory use by 5x
- Summer 2018 **NLP Research Engineer Intern**, *Nuance (acquired by Microsoft)*, Greater Boston, MA.
 - o Applied transformers models to industrial-grade text data for neural machine translation (in TensorFlow)
 - o Used transfer learning with unlabelled data and cross-lingual data to address data-imbalance
 - o Implemented Facebook's FastText word-embeddings to improve quality of semantic word vectors
- Summer 2017 **Computer Vision Engineer Intern**, *Sentrana*, Washington, DC.
 - o Implemented a deep learning system to map satellite images to street-level images (geopositioning)
 - o Extracted and classified synthetic aperture radar data using machine learning for a national intelligence agency
 - o Drafted two-year plan with company executives for a core product that automates machine learning pipelines

Select Publications

- TS4H 2022 **Learning Absorption Rates in Glucose-Insulin Dynamics from Meal Covariates.**
Spotlight Ke Alexander Wang*, Matthew E. Levine*, Jiaxin Shi, Emily B. Fox.
- ICLR 2022 **Is Importance Weighting Incompatible with Interpolating Classifiers?**
Ke Alexander Wang*, Niladri S. Chatterji*, Saminul Haque, Tatsunori Hashimoto.
- ICBINB 2021 **GOPHER: Categorical probabilistic forecasting with graph structure via local continuous-time dynamics.**
Spotlight Ke Alexander Wang, Danielle Maddix, Yuyang Wang.
- NeurIPS 2020 **Simplifying Lagrangian and Hamiltonian Neural Networks via Explicit Constraints.**
Spotlight Marc Finzi*, Ke Alexander Wang*, Andrew G. Wilson.
- NeurIPS 2019 **Exact Gaussian Processes on a Million Data Points.**
Ke Alexander Wang*, Geoff Pleiss*, Jacob R. Gardner, Stephen Tyree, Kilian Q. Weinberger, Andrew G. Wilson.

Select technical skills

Python, PyTorch, Pandas, Numpy, Jax, MATLAB, Unix, Bash, Git