JP Chen

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RESEARCH INTERESTS Probabilistic programming, deep learning, generative models, approximate inference, computer vision, Bayesian statistics, stochastic optimization

EDUCATION

University of Pennsylvania, *Philadelphia, PA*
BSE, Computer Science — May 2015
(Minors: Physics, Mathematics)

EMPLOYMENT

Uber AI Labs, *San Francisco, CA* — Apr 2017–
Research Scientist

Stanford Computation & Cognition Lab, *Palo Alto, CA* — Oct 2016–Apr 2017
Research Engineer

Amazon Web Services, *Seattle, WA* — Aug 2015–July 2016
Software Engineer

PREPRINTS & PUBLICATIONS

J. P. Chen*, F. Obermeyer*, V. Lyapunov, L. Gueguen, N. Goodman. "Joint Mapping and Calibration via Differentiable Sensor Fusion". *Submitted to CVPR.*

F. Obermeyer, E. Bingham, M. Jankowiak, D. Phan, **J. P. Chen**. "Functional Tensors for Probabilistic Programming". *Submitted to AISTATS.*

J. P. Chen, F. Obermeyer, P. Szerlip. "Inverse Graphics for Transfer Learning of Small Objects". *In Progress.*

F. Obermeyer, **J. P. Chen**, M. Jankowiak. "TreeCat: a Bayesian Latent Tree Model of Sparse Heterogeneous Tabular Data". *In Progress.*

J. Chen, **J. P. Chen**, M. Wornow, M. Bae, A. Berliner, D. Liu. "Deep Generative Models for DNA Synthesis". *In Progress.*

S. Webb, **J. P. Chen**, M. Jankowiak, N. Goodman. "Improving Automated Variational Inference with Normalizing Flows". *ICML AutoML Workshop.* 2019.

E. Bingham, **J. P. Chen**, M. Jankowiak, N. Pradhan, T. Karaletsos, R. Singh, P. Szerlip, P. Horsfall, N. Goodman. "Pyro: Deep Universal Probabilistic Programming". *Journal of Machine Learning Research.* 2018.

J. P. Chen, R. Singh, E. Bingham, N. Goodman. "Transpiling Stan models to Pyro". *The International Conference on Probabilistic Programming.* 2018.

OPEN SOURCE

Pyro
Deep Universal Probabilistic Programming
http://pyro.ai
http://github.con/pyro-ppl/pyro

Pyro-Stan Compiler
Compiler for Stan models to Pyro
http://github.con/jpchen/pyro-stan-compiler

Torch JS
Torch for Javascript
http://github.con/jpchen/torch.js

Pyro Model Zoo
Library of Stan models written in Pyro
http://github.con/pyro-ppl/pyro-models

NumPyro
Pyro on JAX for JIT compilation for GPU acceleration
Developed models for Uber
http://github.con/pyro-ppl/numpyro

PATENTS F. Obermeyer, **J. P. Chen**, V. Lyapunov, L. Gueguen, N. Goodman, B. Kadlec, D. Bemis. "System and Method for Object Location Detection from Imagery." *US Patent* 6/536,869. 2019.

LANGUAGES Python (PyTorch, Tensorflow), Java, Julia, C++