MINGZHANG YIN

3553 Lake Austin Blvd Apt B. ⋄ Austin, TX 78703
(206) · 519 · 8518 ⋄ mzyin@utexas.edu

EDUCATION

The University of Texas at Austin, Ph.D. Candidate in Statistics *May 2019*

- **Supervisor**: Dr. Mingyuan Zhou GPA: 3.98/4.00
- **Relevant Cousework**: Statistical Modeling, Probability Theory, Bayesian Statistical Methods, Monte Carlo Methods in Statistics, Machine Learning for Large Scale Data, Optimization Cumulative GPA: 4.00/4.00
- **Reasearch Interest**: Approximate Bayesian Inference(Variational Inference, MCMC, Partical filtering etc.), Bayesian Deep Learning, Optimization, Bayesian Nonparametric

Fudan University, Bachelor of Science *June 2015*
Mathematics and Applied Mathematics Major GPA: 3.58/4.00

North Carolina State University, Statistics *January 2014*
Exchange student,UNC Exchange Program Cumulative GPA: 4.00/4.00

RESEARCH

ARM: Augment-REINFORCE-merge gradient for discrete latent variable models

- Design unbiased, low variance gradient methods to infer discrete latent variables in variational inference and reinforcement learning. Submitted to NIPS 2018.

Semi-implicit Generative Models

- Applying a hierarchical generative model mixed with explicit and implicit layers. Training semi-implicit generative model(SIGMO) on MLE scheme can maintain high stability and mode capturing ability. Training SIGMO adversarially can reduce mode collapse problem notoriously in GAN. Submitted to NIPS 2018.

Semi-implicit Variational Inference

- Expand variational family with a hierarchical structure combined with explicit layer and implicit layer;
- Achieved accurate uncertainty estimation in Variational Inference. Can serve as black-box inference scheme for unknown posterior. Accepted by ICML 2018, *Long talk*.

Convergence of Gradient EM for Multi-component Gaussian Mixture

- Theoretically achieved near optimum local convergence region and convergence rate for gradient EM on general Gaussian Mixture model.
- Analysis includes both population and finite sample cases. Accepted by NIPS 2017.

INTERNSHIP

Research Intern in Quantlab Financial LLC June 2017-August 2017

- Build passiave trading strategy model and submitted to phase one test.

Data Science Intern in Hewlett Packard Enterprise, Big Data Platform June 2016-August 2016

- Build survival analysis model to predict the close date of sales pipeline.
- Ensemble logistic regression, KNN and LDA to predict sales closing state.
- Apply Topological data analysis to track, predict and classify web click streams. Patent Application #710224784.

Research Intern at China Academy of Science, Computational Biology 2014-2015

- Building epithelial mesenchymal transition(EMT) type 2 map in CellDesigner with Dr.Christine Nardini

HONORS AND AWARDS

Travel Award, NIPS 2017
Capital One modeling competition, rank 2nd place Nation-wide April 2016
Best In Class Intern Prize, Hewlett Packard Enterprise July 2016
Top-notch Student Honor (Subuqing Class) January 2014-July 2015
National 1st Prize in China Mathematics Competition in Modeling October 2013
1st Prize in Eastern China Mathematical Modeling Competition July 2013
Leo Tang Hsiang-chien Scholarship April 2013

SKILLS

Language	Native in Chinese; Fluent in English
Computer Languages	Fluent in R, Python, C++, Matlab, MySQL, LaTeX
Tools	Tensorflow, Pytorch, Parallel computing