Haipeng Gao

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Industry Experience

Aug 2018 May 2018-	**Summer Intern at PayPal	San Jose, CA** *Merchant Risk Modeling* Rapidly prototype early-stage solutions and built predictive models to forecast sellers' future chargeback, including time-series analysis, LSTM, Poisson-process based predictive models. Created highly interpretive dynamics models (input-output hidden Markov models) that imply new context and new semantics for data
Aug 2017 May 2017-	**Summer Intern at UNC Management Company	Chapel Hill, NC** *Investment Strategy & Risk Management* Applied input-output hidden Markov models to support team's directional strategy on stock market indices. Applied change-point detection to support team's momentum strategies on indices. Programmed in R and Python.

Education

May 2019	University of North Carolina at Chapel Hill	Chapel Hill, NC PhD in Interdisciplinary Statistics and Operations Research Dissertation: "Bayesian Inference on Stochastic Cusp Catastrophe Models" Under supervision of Prof. Chuanshu Ji
May 2015	Courant Institute of Mathematical Sciences, NYU	New York, NY MS in Mathematics
Dec 2012	University of North Carolina at Chapel Hill	Chapel Hill, NC BS Highest Distinction in Applied Mathematics, minor in Mathematical Decision Science

Skills

machine learning:	h2o, Scikit-learn, R, Matlab, Stan
deep learning:	Keras, Tensorflow, PyTorch
programming:	Python, Java, SQL, C/C++	cluster-computing: Hadoop, Spark
modeling:	machine learning, time-series analysis, LSTM/RNN hidden Markov models, stochastic differential equations

Teaching Experience

current Jan 2017-	**Instructor at University of North Carolina	Chapel Hill, NC** *Department of Statistics and Operations Research* Taught college-level Introduction to Data Models and Inference (STOR 155) top- ics include exploratory data analysis, linear regression, sampling and experimental design, basic probability, hypothesis testing and inference, class size of 50 students per semester

Interests and Activities

Participated in NYU Intramural Basketball in Spring 2014
Personal investment on US equity