Haipeng Gao

haipeng.gao@yahoo.com (job) | gaoh@live.unc.edu (academic) | Hanes Hall B4, Chapel Hill, NC, 27599

Industry Experience

Aug 2018 May 2018-	Summer Intern at PayPal | San Jose, CA *Merchant Risk Modeling* Built long short-term memory networks (LSTM) in Keras, input-output hidden Markov models in Stan and R, and Poisson process-based models in Stan to forecast merchants' loss using time-series data. Built predictive models to estimate likelihood that merchant will churn and to project the future churn rate for a segment of customers in h2o.
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) in Fall 2018, Spring 2018 and Fall 2017, Spring 2017, class size of 50 students

Interests and Activities

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