CONG (MARK) MU

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EDUCATION

Johns Hopkins University (Baltimore, MD) 08/2017 –
Master of Science in Engineering | **Major: Applied Mathematics and Statistics**

Sun Yat-Sen University (Guangzhou, China) 08/2013 – 06/2017
Bachelor of Science | **Major: Statistics** | **Minor: Finance**

RELATED EXPERIENCE

Research Assistant | **Johns Hopkins University** (Baltimore, MD) 10/2017 –

- Built network models that could be scaled to analyze large networks; developed R package to identify community structure; estimated and simulated network formation models using high performance computing, decreased runtime by **50%** (**Generalized Random Dot Product Graph, Variational Generalized EM, Parallel Computation**)
- Built automatic tools for analyzing dash cam videos and annotated the video stream with relevant information such as timing, speed, traffic and etc, achieved **0.04s** error for timing (**Oriented FAST and Rotated BRIEF, Image Hashing, Deep Neural Networks**)
- Constructed affinity matrix for spectral clustering; developed corresponding justification on different settings (**Low-Rank Subspace Clustering, Sparse Subspace Clustering, Spectral Curvature Clustering, Profile Likelihood, Model-based Clustering**)
- Identified patterns in patient functional trajectories; measured causal effect of different physical therapy dosage regimes on patient functional status; constructed features and built model to optimize physical therapy, achieved **0.96** R-square (**Linear Mixed-Effect Model, ARIMA, Causal Inference**)
- Collaborated with different teams to mine and extract important information from **30GB+** text data; crawled data from websites (**Git**, **API**, **MySQL**, **RegEx, Crawler**)

Analyst Intern | **GF Fund Management** (Guangzhou, China) 11/2016 – 04/2017

- Selected features to build market emotional indicators and developed model to predict market, achieved **92%** accuracy (**XGBoost, Random Forest, Logistic Regression, Lasso**)
- Mined key business data and constructed reporting system; analyzed and visualized product and user data to provide decision support (**R Markdown, R Shiny, R ggplot2**)

Data Science Intern | **Research Center of Statistical Science** (Guangzhou, China) 02/2016 – 10/2016

- Classified users to optimize delivery of advertisements and constructed program recommendation system; predicted whether user will be secondary loans to explore potential customers and evaluate risk in advance (**Collaborative Filtering, Clustering**)
- Presented in 9th China-R Conference and Regional Data Science Conference on using Shiny in R to make an interactive interface rapidly (**R Shiny**)

SKILLS

R (statnet, mclust, dplyr, ggplot2, shiny, Rmpi), Python (NumPy, Pandas, scikit-learn),
SQL, Matlab, C/C++, TensorFlow, OpenCV, Data Visualization, Machine Learning