Yanghong Guo

2 years working experience and 8 years of Math/Statistics background.
Seeking Data Scientist/Quantitative Internship opportunities.

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EDUCATION

University of Texas at Dallas **Aug 2021 – Present**
*PhD in **Statistics**; Main Focus: Machine Learning and Casual Inference; GPA 3.95/4* *Dallas, TX*

Columbia University **Sep 2016 – May 2018**
*MA in **Statistics**; Core Courses: Statistical Machine Learning, Statistical Computation* *New York, NY*

East China University of Science & Technology **Sep 2012 – Jun 2016**
*BS in **Mathematics & Applied Mathematics*** *Shanghai, China*

EXPERIENCE

Industry Researcher **Jul 2019 – Aug 2020**
Bank of China *Beijing, China*

- Analyzed bank customer service data by the NLP Semantic analysis system, extracted effective information by keyword
- Detected and predicted frequently happened customer issues, and generated over 30 reports

Bitcoin and Crypto Data Analyst **Jul 2018 – Mar 2019**
Beijing Micai Investment Co., Ltd. *Beijing, China*

- Implemented automatic quantitative trend-tracing trading strategy with Support Vector Regression(SVR)
- Applied Web-Crawler with Python to collect online STO data then saved to the database by MYSQL
- Generated bilingual research reports on the in-depth study of new-launched STO cryptocurrencies

Quantitative Analysis Intern **Jun – Aug 2017**
China Merchants Securities Co., Ltd. *Shenzhen, China*

- Designed investment strategies by applying LSTM to historical data, with indicators such as RSI and MACD
- Generated reports on the study of newly listed companies and companies currently under procedure to be listed
- Detected listed companies with default risk with financial-soundness indicators in XGBoost and reached an 80% backtesting accuracy

PROJECTS

Change-point Detection Using Bayesian Inference | *R, MCMC, Shrinkage Prior* **May 2022**

- Applied t-shrinkage prior and Horseshoe prior to historical DJI return and Bitcoin-USD return during fluctuating time
- Implemented Markov Chain Monte Carlo(MCMC) methods with R and visualized the detected change-points
- Detected 100% change-points successfully by the given criteria to define a change-point
  GitHub: github.com/yg2485/Change-point-Detection-for-Financial-Markets-Using-Bayesian-Inference

Potential ETC Customer Identification | *Python, TensorFlow, Scikit-learn* **Nov 2019**

- Processed and cleaned the original customer dataset of 9 million samples with de-noise analysis
- Applied naive Bayes principle to obtain the soft voting output under the assumption of independence
- Utilized data discretization methods to further reduce batch size and model complexity
- Refined the data by Grid Search and Ensemble Generation and achieved an AUC around 0.85 when targeting a potential ETC Customer (rank 10/200)

Feature Sensitive 3D Printing Adaptive Slicing Algorithm | *MATLAB, R* **Jun 2016**

- Built the feature sensitive metric of the object surface, then mapped the 3-dimensional points to a sextuple space
- Visualized in MATLAB and pinpointed areas with significant normal vector change and huge curvature of local surface
- Simulated the printing procedure and reduced time consumption by 20% with similar surface accuracy

SKILLS

- **Languages:** Python, MATLAB, C++, Latex, HTML
- **Data Analysis:** R, SAS, MySQL, SQL Server
- **Version Control:** GitHub, Google Colab
- **Machine Learning:** Tensorflow, Scikit-learn, Pytorch

HONORS & AWARDS

- Passed CFA Exam Level III
- Nomination Award in 2019 Bank of China Machine Learning Modeling Contest
- ECUST Academic Scholarship for 2012-2016 consecutively during undergraduate