Le Li

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PROFESSIONAL SUMMARY

Research Scientist (Ph.D., Computer Science) with 10 years' experience in machine learning, statistics, and data science. Expert in statistical modeling and explainable AI to drive strategic decision-making from complex data. Passionate about leveraging quantitative skills in finance and currently self-studying quantitative finance.

TECHNICAL SKILLS

Programming Languages: Python (NumPy, Pandas, SciPy, Scikit-learn), C++, MatLab, SQL, R, Bash

Mathematics and Statistics: Statistical Modeling, Time-Series Analysis, Optimization, Calculus, Probability Theory

Data Analysis: Predictive Modeling, Algorithm Development, Data Visualization, Deep Learning, Risk Modeling

Platforms and Tools: High-Performance Computing, AWS, Docker, Git, Tableau, Excel

PROFESSIONAL EXPERIENCE

Research Scientist (Postdoctoral Associate) **Cornell University** *New York, USA* *02/2019 - Present*

- **Quantitative Modeling and Risk Forecasting**
  - Developed and implemented advanced quantitative models for forecasting and predictive analytics, leading to explainable performance analysis and informed strategic decision-making.
- **Pipeline Development and Deployment**
  - Designed and deployed computational pipelines and infrastructures for big data analysis, automating processes with CI/CD practices to enhance efficiency and reduce costs.
- **Data Processing, Analysis, and Visualization**
  - Processed and analyzed large-scale real-world data by performing data cleaning and wrangling to identify patterns and anomalies; presented data insights through clear and impactful visualizations.
- **Leadership and Collaboration**
  - Led and mentored a team of 4 researchers in data analysis, fostering skill development and project success.
  - Collaborated cross-functionally to develop innovative solutions, enhancing team synergy and project outcome.

Research Assistant (Ph.D. Candidate) **The Chinese University of Hong Kong** *08/2014 - 02/2019*

- **Quantitative Modeling and Machine Learning**
  - Developed high-accuracy predictive models utilizing statistical modeling and machine learning to analyze correlation patterns, identifying key factors influencing outcomes.
- **Leadership and Collaboration**
  - Collaborated with external teams and mentored juniors, enhancing task efficiency and knowledge transfer.
  - Facilitated smooth project execution and promoted effective communication among team members.

SELECTED PROJECTS

- **Quantitative modeling for anomaly (variations) detection in large genetics sequence datasets (link)**
  - Led a research team to develop a quantitative pipeline to identify anomaly patterns of in a new sequence data, increasing recall by 31% and processing speed by 20×, significantly reducing computing resources.
  - Skills: Statistical Modeling, Machine Learning, Algorithm Optimization, C++, Python.
- **Deep learning model for predictive analysis with heterogeneous dataset (link)**
  - Developed a deep learning model that effectively analyzed multi-modal data to achieve accurate drug-target interaction predictions, reducing the drug repurposing search space from 28 million to 45,000 candidates.
  - Skills: Natural Language Processing, Sequence/Network Data Modeling, Predictive Modeling for Interactions.
- **Advanced time-series analysis and risk forecasting of opioid relapse using predictive modeling (link)**
  - Applied multivariate time-series analysis, deep learning, and predictive modeling techniques to forecast risk levels based on historical drug usage data, supporting proactive clinical decision-making processes.
  - Skills: Time-Series Analysis, Predictive Modeling, Statistical Analysis, Deep Learning, Forecasting Models.

EDUCATION

PhD, Computer Science and Engineering **The Chinese University of Hong Kong** *08/2014 - 11/2018*

Msc, Computer Applied Technology **South China University of Technology** *09/2011 - 06/2014*

BSc, Computer Science and Technology **South China University of Technology** *09/2008 - 06/2011*