Di (Patrick) Lu

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EDUCATION

University of Michigan **Sept.2017 - Dec.2018**
Master of Science in Quantitative Finance and Risk Management *Ann Arbor, MI*

- Cumulative GPA: 3.94/4.00. Coursework: Stochastic Analysis for Finance, Numerical Methods, Computational Finance, Applied Statistics, Machine Learning, Data Manipulation and Analysis

Peking University **Sept.2013 - Jul.2017**
Bachelor of Economics in Finance *Beijing*

- Cumulative GPA: 3.67/4.00. Award: Merit Student at Guanghua School of Management
- Selected Coursework: Corporate Finance, Fixed Income Securities, Financial Derivatives, Financial Time Series

PROFESSIONAL EXPERIENCE

Morgan Stanley Capital International (MSCI) **May.2018 - Aug.2018**
Quantitative Model Validation, Summer Intern *Norman, OK*

- Studied functionality of fixed income risk factor model, developed test plan and test cases to extent the coverage for new asset type, verified fomulas and analyzed regression tests to ensure the accuracy of numerical results
- Worked on improvement of performance attribution model, investigated defects of handling special time or market situations, conducted root cause analysis, tested resolutions for Contingent Convertible Bond and credit derivatives
- Investigated DFAST use cases by building up composite stress scenarios to assess portfolio risk analysis
- Developed Python validation tool to build XML queries and improve test automation for sensitivity statistics

China Securities **Sept.2016 - Dec.2016**
Strategy Research, Intern *Beijing*

- Prepared weekly macroeconomy and market data overview by tracking major macroeconomic indices, global stock markets and commodity prices, automating visualization process, thus providing support for strategic asset allocation
- Conducted momentum strategy backtesting, evaluated effectiveness of trading strategies by examining market mean reversion trend and diagnosing volatility structure with SAS

China International Capital Corporation **Jul.2016 - Aug.2016**
FICC, Summer Analyst *Beijing*

- Built up financial models for valuation in Special Situation business, evaluated an equity collateral asset in an adverse scenario of company privatization to propose the safe margin for alternative investment portfolio under management
- Collected financial information of technology startups on OTC market, performed screening by ratio analysis of target companies for venture lending, and proposed a list of candidate companies for investment committee

RESEARCH EXPERIENCE

Michigan Quant Lab **Sept.2017 - present**
Student Researcher *Ann Arbor, MI*

- Implemented scalable Python modules to carve portfolio risk profile by applying monte-carlo simulation of risk factors and EWMA volatility estimation scheme
- Researched on modelling of correlated financial assets, to propose mathematical property of correlation matrix, investigate default distribution of a credit basket, and connect to financial implications for pricing and risk models

SKILLS

Technical skills: C++, Python (Pandas, Seaborn, Scikit-learn), Matlab, R, SAS, LaTeX
Certificate: CFA Level II Exam passed