Dongxu Li

Project Experience

2017-07 - present

Exploring Network Structure of S&P 500

- Visualizing the stock price return correlation table of selected tickers in S&P 500.
- Construct network structure of the stock universe based on the correlation coefficient, detect network clustering and grouping.
- Analyze the turmoil of stock price spread through the network structure, and explore potential profitable trading strategy.
- Test strategy through Quantopian paper trading platform.

2016-09 - present

Mathematical Finance Practice

- Geometric interpretation of Financial Derivatives.
- Fitting Martingale Model for short rate using Treasury Strips Data, under floating short rate setting, pricing European option by using General Black-Scholes-Merton theory.
- Barrier option pricing with Monte Carlo simulation and with reflection principal on a Brownian Motion setting.
- Stochastic optimal control: simple dynamic programming on portfolio optimization with linear regulator.

2016-03 - 2016-04

Summer Intern

- Sales Account Summer Intern, Credit Center, China Merchants Bank, Shandong
- Software Intern, Intelligent Application Department, Neusoft, Dalian

2015-10 - 2016-04

Research Assistant at Computer Vision Lab

Project: Relative Attribute

- Ranking images in the LFW (Labeled Faces in the Wild) data set according to the strength of certain attributes, such as grayscale of people's hair and visibleness of teeth.
- Improved the efficiency of learning RankSVM function using optimization toolbox.

2013-06 - 2014-07

Research Assistant at Computer Social Science Lab

Project: Evolutionary Game in Space

- Exploring evolutionary games and population dynamics in Small world network by conducting Monte Carlo simulation.
- Simulate Ebola transmission in Africa, and developed optimal medical manufacturing and delivery strategy to control the spread of the disease.

Education

2016-08 - 2017-12

Mathematics department, University of Michigan, Ann Arbor, M.S. Mathematical probability and Statistics

- GPA: 3.90/4.00, currently focus: Quantitative Finance and Risk Management.
- Current Courses: Numerical Method, Stochastic Analysis, Statistical Analysis of Financial Data.
- Upcoming Courses: Computational Finance, Convex Optimization, Machine Learning.
- Active learner on Online Open Courses: Apply Machine Learning in Python, Neural Networks and Deep Learning
- Member of Michigan Data Science Team

2012-09 - 2016-06

Mathematics department, Dalian University of Technology, B.S. Information And Computational Science

- GPA: 3.88/4.00, Concentration in Applied Mathematics and Computational Methods
- Core Course: Multivariable calculus, Advanced Algebra, Real and Complex Variable Function, Numerical Analysis
- Mathematical Contest in Modeling, 3rd prize, 2014. Interdisciplinary Contest in Modeling, 3rd prize, 2015
- Member of Young Volunteers Association at DLUT, Member of Chess Club at DLUT

Summary

Dongxu is a highly productive and self motivated learner.
He is a team player and great listener.
He has passion for life, technology and mathematics.

Personal Info

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Portfolio Website
https://leodongxu.wixsite.com/quant

Skills

Fundamental Math (Calculus, Linear Algebra, Probability)
Advanced

Anaconda Data Science Platform(python)
Intermediate

Matlab
Project Experience

R
Project Experience

Basic Linux Command Line
Beginner

Bloomberg and Factset Terminal
Beginner

Team Work
Comfortable with small team setting

Public Speaking
Beginner

English
Fluent

Mandarin
Native speaker

Sports (basketball, tennis, ping pong, swimming, Hiking)
Advanced