

# Dongxu Li

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## Education

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### M.S. Mathematical Probability And Statistics

Aug 2016 - Dec 2017

University of Michigan, Ann Arbor

- GPA: 3.90/4.00, currently focus: Quantitative Finance and Risk Management.
- Current Courses: Numerical Analysis, Stochastic Analysis, Financial Analysis, Statistical Analysis of Financial Data.
- Upcoming Courses: Computational Finance, Advanced Stochastic Analysis, Machine Learning, Data mining.

### B.S. Information And Computational Science

Sep 2012 - Jun 2016

Dalian University of Technology

- GPA: 3.88/4.00, Concentration in Applied Mathematics and Computational Methods
- Core Course: Mathematical Analysis, Advanced Algebra, Real and Complex Variable Function, Probability and Stochastic Processes, Mathematical Modeling, Numerical Applications
- Active learner on Online Open Courses: Machine Learning, Introduction to Python, Statistics with R

## Research Experience

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### Research Assistant at Computer Vision Lab

Oct 2015 -Apr 2016

Project: Relative Attribute and Image Retrieval

- 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.
- Developed algorithm to find concave corner in 2D and 3D images for image retrieval.

### Research Assistant at Computer Social Science Lab

Jun 2013 – Jul 2014

Project: Ultimatum Game in Space

- Constructed virtual network in 3D space with different topology features, created ultimatum game rules for virtual people in the network where they can play through the connection in the network. Conducted simulation of the evolutionary network, and calculated the accumulated game result for individuals in the network.
- Applied the evolutionary network model to simulate Ebola transmission, and developed medical manufacturing and delivery strategy to control the spread of the disease. Successfully limited the ratio of the patients who got infected to an equilibrium condition.

### Probability Model Practice

Current

- Derivative pricing and Optimal Stopping time on a binomial tree model.
- 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 principle on a Brownian Motion setting.
- Stochastic optimal control: simple dynamic programming on portfolio optimization with linear regulator.

## Skills

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- Project Experience With: C, C++, Matlab, Python, R
- Bloomberg Market Concepts (BMC) Certificate of Completion

## Awards And Activities

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- Sales Account Summer Intern, Credit Center, China Merchants Bank, Shandong
- Software Intern, Intelligent Application Department, Neusoft, Dalian
- Mathematical Contest in Modeling, 3rd prize, 2014. Interdisciplinary Contest in Modeling, 3rd prize, 2015
- DLUT Badminton Competition 1st place, 2014. DLUT Tennis Competition 1st place, 2015.