

# Esther (Shuangning) Zhu

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## EDUCATION

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### University of Michigan

Ann Arbor, MI

*Master of Science in Quantitative Finance and Risk Management*

Sept. 2017 – Expected May 2018

*Bachelor of Science in Financial Mathematics*

Sept. 2015 – May 2017

- GPA: **3.84/4.00** James B. Angell Scholar and University Honors
- Courses: Financial Math, Stochastic Process, Linear Programming, Probability, Statistics, Computer Science

### Beijing Foreign Studies University

Beijing, China

*Double Major in Finance and English Literature*

Sept. 2012 – Jun. 2015

- GPA: **3.62/4.00** Global Times Scholarship (Top 5%)
- Courses: Financial Accounting, Merger and Acquisition, Financial Statement Analysis, International Finance

## WORK EXPERIENCE

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### Stephen M. Ross School of Business

Ann Arbor, MI

*Research Assistant*

Sept. 2017 – Present

- Consolidate and cleanse big data of company information, generate lists and data frames for analysis
- Categorize companies by industry code (i.e. SIC, NAICS) and measure market concentration by HHI
- Extract 50-year data of 10 countries from sources such as Bloomberg, FRED, World Bank, IMF and etc.
- Use Python Pandas and R to do regression and conduct fundamental analysis

### Chinalin Securities Co.

Beijing, China

*Fixed Income Summer Intern*

Jul. 2017 – Aug. 2017

- Modeled cash flow and bond structure of a \$60M Asset Backed Securities (ABS)
- Finalized documentation of securitization, closing transaction 2 weeks ahead of schedule
- Conducted research on electric power industry that supported seniors to implement risk analytics
- Checked on financial statements and data files, contributing to collection of preliminary pool

### Stephen M. Ross School of Business

Ann Arbor, MI

*Research Assistant*

May 2017 – Jun. 2017

- Assisted on the paper “Estimating and Testing Dynamic Corporate Finance Models”
- Revised a Monte Carlo study, using C++ and Python to make multiple simulations on Linux system

### China Guangfa Bank

Beijing, China

*Investment Analyst Intern*

Feb. 2015 – Mar. 2015

- Segmented 700 customers in database, improving the quality of customer service
- Connected with more than 150 industrial clients and assisted them in the system update process

## PROJECT EXPERIENCE

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### Financial Research Commercialization | Ross School of Business Fall 2017

Ann Arbor, MI

- Modified business model of a start-up, predicted quarterly EBITDA for 5 years, and pitched to Venture Capital firms

### Multi-package Delivery Project | Industrial and Operations Engineering Fall 2017

Ann Arbor, MI

- Built models to optimize delivery decision for companies, used AMPL to solve *Travelling Salesman Problem*

## SKILLS

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- **R:** Split and merged big data, conducted regression diagnostics, transformed and selected the best model to fit data
- **C++:** Used natural language processing and machine learning techniques, implemented and debugged 10+ projects
- **Python:** Wrote algorithms to model market risk and built Monte Carlo simulations of 3 stocks
- **Excel:** Applied financial functions and tools such as VLookup, Risk, Precision Tree, and Solver