

## YUNXIAO XIANG

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### EDUCATION

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#### NEW YORK UNIVERSITY

New York, NY

#### The Courant Institute of Mathematical Sciences

M.S. in Mathematics in Finance (expected – Dec. 2020)

- **Current Coursework:** Risk-neutral pricing, martingales, VaR, Markov chain, Brownian motion, Black-Scholes model, dynamic asset pricing, Black-Litterman, volatility modeling, OOP in Java, interest rate & FX modeling, statistical arbitrage, Monte Carlo simulation, stress testing, Greeks
- **Future Coursework:** HJB equation, SABR model, SVI implied volatility model, back-testing

#### UNIVERSITY OF CALIFORNIA, SAN DIEGO

La Jolla, CA

B.S. in Applied Mathematics; B.A. in Economics (Sep. 2015 – Jun. 2019)

- **Coursework:** Arbitrage pricing, hedging, Markowitz model, CAPM, CLT, SVD, ODE, Bootstrap, MLE, hypothesis testing, regression, ACF, ARIMA model in time series, heat and wave equation

### EXPERIENCE

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#### NEW YORK UNIVERSITY

New York, NY

*Teaching Assistant* (Sep. 2019 – present)

- Devise teaching plans in Microsoft Word for 50 students from an Algebra & Calculus course
- Organize students into group discussion to develop deeper understanding of materials
- Hold office hours and review sessions weekly to emphasize salient concepts and answer questions

#### SHANGHAI BLACK WING ASSET CO., LTD

Shanghai, China

*Summer Intern – Buy-side Trading Analyst* (Aug. 2018 – Sep. 2018)

- Implemented Shanghai ETF50 index (collection of 50 leading stocks) to grasp general trends in A-share market, then analyzed existing data in the past 3 months to broadly forecast the upcoming trend
- Communicated results with clients in non-technical way and advised on their portfolio management
- Coded in Java and simulated quantitative trading system in futures market, subsequently finding its limitation in small-cap stocks, which is due to low market liquidity and manipulation of speculators

### PROJECTS

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#### UNIVERSITY OF CALIFORNIA, SAN DIEGO

La Jolla, CA

*Deal Probability of Russian Advertisement – Multivariate Regression Modeling in R*

- Leveraged Python to extract numerical and logistic variables from product descriptions and image
- Visualized data in R and constructed multivariate regression model after subset selection
- Tested model and found its limitation on modeling skewed data with many zeros in response variable
- Fixed logistic regression model by converting numerical deal probability to logistic variable
- Created a report to explain investigation and suggested variables that significantly influence deal probability of goods based on dataset: price, presence of image and capital letter count in description

*Time Series Forecasting – ARMA Modeling in R*

- Visualized data and plotted ACF & PACF to justify covariance stationarity; leveraged Ljung-Box test to check time dependency in quarterly data of interest-spread from 1960.Q1 to 2008.Q1
- Evaluated 6 ARMA models based on AIC, BIC and test on residuals to fit given time series
- Simulated ARMA11 to forecast upcoming trend and recognized its limitation in long-term prediction

*Patterns of Video Gaming – Bootstrapping in R*

- Applied Bootstrap, Pearson's chi-squared test, CLT and CART to survey data answered by 95 students collected in 1994 to analyze patterns of video gaming and preferences of game types
- Suggested that relaxing environment would possibly improve design of statistical lab in UCB under assumption that students' preferences of lab content resembled patterns of gaming

*Game 2048 – Algorithm and UI Implementing in Java*

- Leveraged OOP in Java to design fully-functioning Game 2048 with graphical user interface
- Collected feedback from users and improved towards more user-friendly interface

### COMPUTER SKILLS/OTHER

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**Programming Languages:** R, Java (proficient); Python, MATLAB, Stata (intermediate)

**Languages:** Chinese (native), English (bilingual proficiency), Japanese (elementary proficiency)