

Aakriti Mittal

180 CLAREMONT AVENUE #36, NY 10027, NEW YORK
AM4574 @COLUMBIA.EDU • 347-279-3810

EDUCATION

COLUMBIA UNIVERSITY

Master of Science, Financial Engineering, 4.0/4.0

Coursework: Volatility Smile Modeling, Machine Learning, Monte-Carlo Simulations, Time-series & data Analysis, Continuous-time Asset Pricing, Stochastic Models, Optimization Methods, Applications Programming

New York, NY
Sep 2016 – Dec 2017

INDIAN INSTITUTE OF TECHNOLOGY KANPUR

Bachelor of Science, Economics, Minor in Artificial Intelligence, 9.6/10

Coursework: Macro Economics, Econometrics, Bayesian Data Analysis, Algorithms, Machine Learning

Kanpur, India
Jul 2012 – May 2016

EXPERIENCE

Summer Intern, Risk Team

Graham Capital Management

Norwalk, CT
June 2017- Aug 2017

- Created an R Shiny app for mean-variance portfolio optimization with long-short positions and liquidity constraints
- Enhanced the performance of optimizer by using robust covariance matrix and portfolio rebalancing
- Assessed the relevance and non-linearity of Philips Curve in the light of technological developments and globalization

Research Intern, Health Economics

IIM Bangalore

Bangalore, India
May 2015 - Jul 2015

- Applied econometric and analytical skills to examine the problem of rising anti-microbial resistance in India
- Investigated causal relationship between prescriptions by untrained physicians and usage of antibiotics
- Trained fixed effect multivariate regression model on 1M prescription data points using Stata script

Summer Intern, Financial Economics

IIT Kanpur, Summer Undergraduate Research and Graduate Excellence Program '14

Kanpur, India
May 2014– Jul 2014

- Analyzed returns and volatilities of BSE Sensex and CNX Nifty stock indices using ARCH and GARCH time series models
- Studied impact of the Global financial crisis on the Indian financial markets for pre-crisis (2000-06), crisis (2007-10) and post-crisis (2011-14) periods
- **Publication:** Kulshreshtha, P., and Mittal, A. (2015), “Volatility in the Indian Financial Market Before, During and After the Global Financial Crisis”, Journal of Accounting and Finance, Vol. 15 (5)

Core Team Member, Counseling Service

IIT Kanpur

Kanpur, India
Mar 2014- Apr 2015

- Led a team of 130 student guides to organize a 15-day Orientation program for 830 freshmen
- Collectively overlooked the management and allocation of 1.5M INR of funds for yearlong welfare activities of the service
- Tutored emotionally and academically deficient students to achieve Zero termination term

ACADEMIC PROJECTS

Portfolio Optimization

Nov 2016 – Dec 2016

- Developed a program using C++, Python and Gurobi script to run over Russel 2000 historical stock data
- Implemented Sharpe ratio maximizing portfolio optimization problem using PCA approximation

Bayesian Data Analysis

Mar 2016 – Apr 2016

- Employed Bayesian method analysis to analyze influence of demographic factors on crime rate in US
- Created a MATLAB program to estimate Bayesian Quantile Regression model using Gibbs sampling

Machine Learning

Feb 2016 – Apr 2016

- Performed object classification in video data, applied semi-supervised learning approach in Python
- Employed Convolutional Neural Networks and Kalman filter for features extraction, k-nearest neighbor algorithm for classification

HONORS AND SKILLS

- **Computer:** C/C++, R, Python, MATLAB, Latex, Stata, VBA, Excel, Gurobi, R Shiny
- Appointed as **IEOR Student Ambassador'17**, to promote the program and assist with the screening process of graduate students
- **General Proficiency Medal '16**, for the best academic performance among graduating students in Economics Department, IITK
- Received **KVPY fellowship '12** awarded by the Govt. of India to top 400 students in the country for excellent research aptitude
- Selected for **NTSE scholarship (2008)** given by the Govt. of India to top 0.1 percentage students in 1 million applicants