

# JAI KRISHNA CHAPARALA

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## EDUCATION

### Princeton University

*Master in Finance, Bendheim Center for Finance*

Anticipated Coursework: Asset Pricing, Statistical Analysis of Financial Data, Financial Econometrics, Machine Learning

**Princeton, NJ**

*Sept 2021 - Jun 2023*

### Indian Institute of Technology Kharagpur

*B.Tech. (Honours), Computer Science, CGPA: 8.93/10.0*

*Senior Thesis: Chatbots for Ecommerce, Grade: 10.0/10.0*

**Kharagpur, India**

*Jul 2014 - May 2018*

## EXPERIENCE

### Goldman Sachs

*Associate, Market Risk Strats*

**Bengaluru, India**

*Jul 2018 - Jul 2021*

- Developed a PnL approximation algorithm to significantly speed-up Monte Carlo simulation-based VaR calculation.
- Developed regression models, dimensionality reduction and error metrics to approximate daily VaR with < 2% error.
- Saved \$12MM/year in recurring costs by reducing ~1MM peak CPU hours usage per day by cutting down the number of scenarios priced daily for VaR from 16bn to 4bn, and 30k AWS cores were returned as a result.
- Optimized IR risk factor VaR, stress test models using market data APIs, resulting in cost reduction of ~\$5MM/year.
- Developed the IMA pricing, risk calculation framework, and capital calculation models under FRTB regulations.
- Developed IR and Inflation risk models, NII models and conducted quantitative impact studies for capital estimation.
- Awarded the highest performance rating conferred on top-quartile performers globally and promoted to Associate.

### D.E. Shaw

*Quant Developer Intern, Long-Short Equity*

**Hyderabad, India**

*May 2017 - Jul 2017*

- Developed a model leveraging Natural Language Processing and Fuzzy Searching to extract geolocation and retail store identifier info using the description field of a huge proprietary American credit card dataset with > 4bn transactions.
- Achieved 60% better identification of geotagging than the data vendor and > 95% extraction rate of store-id information.
- Received an offer to join the Long-Short Equity Alternative Data team as a full-time quantitative developer.

### BigClozet

*Machine Learning Internship*

**Bengaluru, India**

*May 2016 - Jul 2016*

- Developed color segmentation and pattern recognition modules using open-cv and sklearn for apparel.
- Used transfer learning on pre-trained GoogleNet architecture-based deep CNNs to classify footwear into sub-categories.

## RESEARCH AND PUBLICATIONS

### Indian Institute of Technology - Department of Computer Science

*Chatbots for Ecommerce: Senior thesis in collaboration with Capillary Technologies*

**Kharagpur, India**

*Aug 2017 - May 2018*

- Developed statistical and deep learning models to reduce user-interaction time with chatbots for optimal order placement.
- Automated Q/A, search, review summarization, and feature specific sentiment analysis for Amazon's electronics dataset.

**Publication:** Srivastava Avikalp, Madhav Datt, **Jaikrishna Chaparala**, Shubham Mangla, and Priyadarshi Patnaik. "Social Media Advertisement Outreach: Learning the Role of Aesthetics." Proceedings of the 40th annual international **ACM SIGIR** Conference on Research and Development in Information Retrieval. ACM, 2017.

## AWARDS & HONOURS

- 2017 Amazon Code Wizard Challenge: Winner in the 3-stage countrywide Machine Learning hackathon by Amazon.
- 2017 Capillary Data Science Challenge: Winner in the 2-week ML competition held by Capillary Technologies.
- 2017 Microsoft Artificial Intelligence Hackathon: Runner-up (2nd place) among 200 participant teams.
- 2014 JEE Mains: Secured 13th place in India among 1.5 million participants with a score of 340/360.
- International Olympiads: Qualified to India finals(Stage 3) in Astronomy(Top 20-India) and Junior Science(Top 40-India)
- South Indian Mathematics Olympiad: Ranked 6th/~60,000 in the 2-stage national mathematics competition.
- Scholarships: NTSE(Top 0.2% in India, Govt. of India), KVPY(Govt. of India).

## ADDITIONAL INFORMATION

**Languages:** English, Hindi, Telugu, Malayalam.

**Programming Experience:** C++, Python, Java, SQL, NLTK, Sklearn, Scipy, Pandas, Statsmodels, etc.

**Interests:** Poker, Cricket(NSO-IIT Kharagpur), Cryptocurrencies, Reading, Piano, Chess.

**Others:** Provided technical and career mentorship to students and early professionals across India through Scaler Academy.