

Gobind Singh

gobind452@gmail.com | LinkedIn | Website | +91-9717721675

Education

Indian Institute of Technology, Delhi

July' 16 - July' 20

B.Tech. | Physics & Computer Science | Overall GPA : **9.2/10** | CS **GPA: 9.4/10** | **Rank 2/60** students

Key Courses: Linear Algebra, Probability, Data Structures, Algorithms, Databases, Signals & Systems, Mathematical Physics, Machine Learning, Artificial Intelligence, Group Theory, General Relativity, Game Theory, Computational Physics

Top 7% IIT Merit Prize (6 semesters), 99.9 percentile JEE Main & Advanced (1.2M candidates)

Work Experience

Quantitative Researcher, Edge Focus Partners

Jul '24 - Present

Credit Investment Management

Portfolio manager leading end-to-end real-time algorithmic bidding and pricing for US consumer loans using statistical / ML models; manage signal research, model development, execution, and backtesting for a scalable **\$50MM portfolio**

Conduct alpha research and large-scale data modeling, evaluating **400M+ of loans daily** to identify profitable, unexplored trades; optimized latency in competitive auctions to **2x take rates** and scale portfolio size at the same return target

Enabled a previously unfeasible **\$25MM secondary portfolio trade** by building Bayesian Markov models to dynamically adjust default and prepay probabilities based on loan transitions across delinquent states

Built **gradient boosted models** to underwrite passive consumer loan purchases across multiple US platforms, supporting **>\$500MM** in warehouse facilities with **Goldman Sachs** as lender and **Fortress Group** as joint investor; developed levered return simulations and delivered quantitative analysis across diverse deal lifecycles

Quantitative Researcher, Goldman Sachs

Feb '22 - Jul '24

Asia Credit Trading, Global Markets

Improved **bond spread prediction** by using statistical models and feature engineering with factors - indices, sectors, momentum and liquidity; decreased relative error for the bond universe by **10%**; utilized for **hedging and P&L attribution** by traders

Developed a **pricing and hedging model** for trading of cross currency **bond options** involving **stochastic calculus** to represent correlated assets (FX, rates, and credit), Monte Carlo simulations and coding in **Slang, Python and C++**.

Authored **comprehensive model documentation** over 6 months, including experiments, sensitivity analyses, and stress tests, to quantify model risk and secure regulatory approval; deployed the model working with the traders

Led efforts to model **interest rates - credit correlation** to incorporate them in models and trading strategies

Quantitative Researcher, Kivi Capital

Oct '20 - Feb '22

Low and Medium Frequency Trading Team, Kivi Capital, Gurgaon

Researched, back-tested and deployed **10+ live trading strategies** on F&O segment for Indian markets to earn **₹3 Cr** generating RoC of **75%**, consisting of novel alphas satisfying Sharpe Ratio thresholds, with holdings from **1 hour to 3 days**

Enhanced the **alpha research & back-testing** framework to allow traders to research strategies with condition dependent entry and exit times, and built **correlation measures for strategies** used in portfolio management at the firm level

Software Development Intern, Citi

May '19 - July '19

Citi-Connect Team, Trade and Treasury Solutions, Citi Pune

Built a trainable **web-page automation** bot using **Selenium, Javascript and Python** to optimize deployment pipelines

Summer Researcher, University of Tokyo

May '18 - July '18

Ando Gravitational Wave Lab, Physics Department, University of Tokyo

Among **22** students selected globally from **600+ applicants** to participate in fully funded research on gravitational waves

Research / Teaching Experience

Neuro-Symbolic Transfer Learning, IIT Delhi (with Prof Mausam & Prof Parag Singla)

Jan '20 - Jul '20

Built a generalized neural planner enabling **zero-shot transfer** across RDDDL domains using **graph attention networks**; early contributions to the project acknowledged in a publication at **UAI 2022 - SymNet 2.0**

RL for Join Query Optimization, IIT Delhi (with Prof Maya Ramanath)

Sept '19 - Nov '19

Formulated optimal join order as an MDP on query graphs, trained with **deep Q-learning**; deployed as a **new assignment** in IIT's DBMS course.

Teaching Assistant & Academic Mentor, Database Systems (2020) & Linear Algebra (2018), IIT Delhi

Technical Skills

Programming Languages - C/C++ (intermediate), Python (expert), Slang (Goldman Sachs internal language)

Libraries / Tools - Tensorflow, PyTorch, SQL, Pandas, Selenium, Git, Bash, L^AT_EX, AWS