

Experience

IMC Prosperity Trading Competition

Global

Quantitative Trading Participant (Top 100 Rank)

- Designed and implemented **algorithmic trading strategies** using **market microstructure insights** and price action.
- Built custom **backtesting frameworks** to evaluate strategy performance across simulated markets.
- Developed **alpha signals** based on inefficiencies, statistical patterns, and order book behavior.
- Optimized strategies for **PnL maximization** under risk constraints using iterative experimentation.

Siemens Technologies

Bangalore, India

Backend AI Intern

May 2024 – Aug 2024

- Built scalable data pipelines to process large-scale datasets using Python and distributed systems.
- Designed asynchronous systems handling high-throughput data workflows with low-latency processing.
- Applied statistical techniques for structured data extraction and pattern identification.
- Optimized system performance and data flow efficiency in production environments.

Education

Indian Institute of Technology Dharwad — 2022-2026

B.Tech — CPI: 9.1/10

Projects

Monte Carlo Simulation & Black-Scholes Option Pricing

- Implemented **Monte Carlo simulations** to model stochastic processes and approximate expected values.
- Simulated **stock price paths** using geometric Brownian motion for option pricing.
- Priced European options and validated results against **Black-Scholes analytical solutions**.
- Applied **probability theory and statistical modeling** for financial derivatives valuation.

Time Series Forecasting

- Built **ARIMA** and seasonal decomposition models to forecast U.S. monthly female birth rates.
- Analyzed temporal dependencies using **ACF (Autocorrelation)** and **PACF** plots for model selection.
- Evaluated forecasting performance using **RMSE** and visualized long-term trends.
- Identified **seasonality, trend components, and mean-reversion patterns** in time series data.

Technical Skills

- **Programming:** Python (Primary), C++ (Basic)
- **Core Concepts:** Data Structures & Algorithms, Probability, Statistics
- **Mathematics:** Linear Algebra, Differential Equations, Optimization, Stochastic Processes
- **Quant Skills:** Backtesting, Alpha Signal Generation, Time Series Analysis, Market Microstructure
- **Tools:** NumPy, Pandas, SciPy
- **Systems:** Linux/Unix Environments
- **Strengths:** Analytical Thinking, Problem Solving, Attention to Detail

Coding Profiles

Codeforces: Expert — **CodeChef:** 5-Star — **LeetCode:** 500+ problems solved