Varun Sunil Shah

Ph: +91 9916306595 | Email: varunsunilshah@gmail.com

Experience

WORLDQUANT LLC | Deep Researcher
May 2021 – July 2021, July 2022 - Present | Mumbai, India
- ➔ Creating high value predictive signals from fundamental data to trade the market
- ➔ Built a risk factor analysis framework that tested the value added by a custom risk factor to a multi-asset model; based off of the Barra Multi Factor model
- ➔ Scraped the SEC website and annual reports of over 50 firms to gain alternative data for analysis and conducted big data analysis on hotel management data

CURL CAPITAL LLC | Intern - Algorithmic Trader
September 2021 – December 2021 | Mumbai, India
- ➔ Worked in a curated team of algorithmic traders to design quantitative techniques, build multiple trading indicators and create complex pairs trading strategies
- ➔ Created option Greek hedging tools for multi-option portfolios that allows traders to dynamically hedge risk against multiple Greeks at once instantaneously

SOCIÉTÉ GÉNÉRALE | Intern - Quantitative Investment Strategies
December 2020 – January 2021 | Bangalore, India
- ➔ Created complex structured products that used smart beta and alternative risk premium techniques to gain an edge over passive investing using Python and R
- ➔ Conducted research and executed Risk Parity Portfolio Optimization to develop a product that maximizes the risk-adjusted return of a portfolio of selected securities

Projects

GAUSSIAN MEASURES ON A BANACH SPACE | IIT Bombay
Spring 2022 | Guide: Prof. Suresh Kumar
- ➔ Read, understood, and eventually constructed Weiner measures on any separable Banach space, and studied properties and examples of the same
- ➔ Connected Weiner measures to the realm of partial differential equations and their solutions, and summarized my findings in a report

RISK PARITY PORTFOLIO CONSTRUCTION | Société Générale
December 2020 | Bangalore, India
- ➔ Understood and implemented the risk-parity portfolio optimization method in a portfolio of structured products to see value addition by a new fitness function
- ➔ Ran the above using the SCRIP Algorithm developed by Profs. Feng and Palomar

Positions of Responsibility

D-AMP MENTOR | Student Mentorship Program, IIT Bombay
April 2020 - May 2022
- ➔ Mentored 10 sophomores in their academic and extracurricular endeavours
- ➔ Acting as the mediating party in student-professor relations in the Mathematics department, and providing active feedback to the department regarding curriculum

Extracurriculars

- Active member of Saathi, the LGBTQ+ Resource Group of IIT Bombay
- Performed 2 years of social service with ReapBenefit to improve sanitation in a village
- Ascended to the peak of the Kedarkantha mountain range in Himachal Pradesh
- Taught mixing music at the Summer School of Cult at IIT Bombay

Education

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
B.S. in Mathematics with Honors
Aug 2018 - June 2022 | Mumbai, India
CGPA: 9.33 / 10
Awarded the Institute Silver Medal
JEE Advanced AIR: 857

SRI CHAITANYA TECHNO SCHOOL, MARATHAHALLI
Higher Secondary (Grade 12)
May 2016 | Bangalore, India
Percentage: 96.60 / 100

Key Courses

MATHEMATICS

Real and Complex Analysis • Functional Analysis • Partial Differential Equations • Algebra • Probability Theory • Numerical Analysis

STATISTICS

Statistical Inference • Optimization • Regression Analysis • Time Series Analysis • Categorical Data Analysis

OTHER

Logic for Computer Science • Economics • Game Theory and Economic Analysis • Derivative Pricing • Finance and Accounting

Skills

PROGRAMMING

Python • TensorFlow • Keras • R • C/C++ • MATLAB • SAS • Excel • Spark • LaTeX

SOFTWARE/TOOLS

Git • Wordpress • Adobe Illustrator • Pro Tools • Ableton Live • Adobe Premiere Pro