Bharath Hegde

Integrated M.Sc. in Economics (Major),
Minor in Maths and Computing,
Micro Specialization in Artificial Intelligence and Applications
Indian Institute of Technology, Kharagpur

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EDUCATION

Degree	Institute	Board / University	CGPA/Percentage	Year
M.Sc. Economics	Indian Institute of Technology, Kharagpur	IIT	8.62	2020-2025
Senior Secondary	Narayana Junior College	HSc	87.88%	2020
Matriculation	Narayana e-Techno School	CBSE	96.4%	2018

CERTIFICATION

- **Financial Risk Manager Part 1 | Global Association of Risk Professionals** *May '23*
  - Secured **first quartile** in all the four subjects and cleared the examination which has a success rate of around **46%** with distinction

INTERNSHIPS AND PROJECTS

- **Treasury Futures Pricing & Analytics | BlackRock** *May '24 - July '24*
  Core Analytics Solutions Department - Gurugram, India
  - Created a **proprietary predictive model** for improving the **analytics** for **Treasury Futures** in **Aladdin** using data from the **exchanges**
  - Rectified key analytics like **duration** & **CTD** in real time for **80+ Treasury Futures** from **5** different exchanges covering **90% liquidity**
  - Garnered over **42 potential arbitrage trades** using real time **implied repo rates** averaging **3.22%** in profits over **quarter holding period**
- **Quantitative Risk Analyst | Union Bank of India** *May '23 - July '23*
  Risk Management Department- Central Office, Nariman Point, Mumbai
  - Tasked with evaluating the broad **spatial-temporal** impact of **transition risk** on **seven sectors** in the **credit portfolio** in the **long run**
  - Designed **6 scenarios** prescribed by **NGFS** incorporating **1200+** different climate-based input variables using **GCAM** and **IIASA** data
  - Measured radical transformation of **impact on probability of default** in the range of **4 - 520 basis points** across sectors and scenarios
- **Company Valuation and Equity Research Report** *Jan '24 - March '24*
  Prof. Gourishankar S Hiremath, Indian Institute of Technology, Kharagpur
  - Prepared a comprehensive equity research report with thorough **fundamental analysis** of the BSE listed company, **Vikas Ecotech Ltd**
  - Utilised **historical finances** of the company along with **FCFF**, **CCF** and **DCF** methods to estimate the **forecasted value** of the company
  - Estimated an **ideal share price** in the range of **₹2.95-3.05** against the current price of **₹2.75** thus upgrading the company to **buy status**
- **Effect of Macroeconomic Conditions on Bitcoin Price Volatility** *Oct '23 - Dec '23*
  Prof. Pulak Mishra, Indian Institute of Technology, Kharagpur
  - Devised a **forecasting model** to predict **Bitcoin prices** based on variables such as **Money supply**, **Benchmark Index** and **CPI** of India
  - Applied **ADF**, **VAR** and **Granger Causality Tests** to estimate the correlation between the variables and Bitcoin price movement
  - Obtained a significant **positive correlation** between Bitcoin price movement and lagged market returns with a **confidence of 98.4%**

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Python, R, Pine Script, MQL5, HTML, SQL, Rust, Solidity, Matlab, Arduino & Latex
- **Tools and Softwares**: Jupyter, NumPy, Pandas, Keras, Matplotlib, Visual Studio, Stata, SolidWorks, AutoCAD, Ansys & Excel

KEY COURSES TAKEN

- **Economics and Finance**: Microeconomics, Macroeconomics, Advanced Econometric Analysis, Statistics, Development Economics, Financial Institutions and Markets, Public Finance, Financial Management, Economics of Growth, General Equilibrium and Welfare Economics, Corporate Valuation, Derivatives and Risk Management, Database Management with SQL and Behavioral Economics
- **Mathematics**: Advanced Calculus, Linear Algebra, Probability & Statistics, Modern Algebra & Graph Theory and it's Applications

LICENSES AND CERTIFICATIONS

- Market Concepts by **Bloomberg** | Financial Markets, Discounted Cashflow Modelling, Introduction to Valuation with WACC, R Programming & Financial Engineering and Risk Management Specialization by **Coursera** | Machine Learning Specialization, Deep Learning Specialization & AI for Everyone by **DeepLearning.AI** | Machine Learning, Advanced SQL, Time Series & Computer Vision by **Kaggle** | ChainLink, Advanced Solidity & Tron by **CryptoZombies** | Solana Core, DAO & AI Writer with ChatGPT3 by **BuildSpace**

POSITIONS OF RESPONSIBILITY

- **Co-Founder, Blockchain Society | IIT Kharagpur** *Jan '23 - Present*
  - Spearheading the **DeFi** and **Cryptography** sections of the society by holding weekly lectures on the fundamentals of **crypto trading**
  - Managing a community of **130 blockchain enthusiasts** with regular sessions on innovations and hackathons in **blockchain development**
  - Coordinated with **TDeFi** for a lecture session on the **integration** of **businesses** with **blockchain** which saw a turnover of **450 students**

ACHIEVEMENTS

- **Gold [650+ contenders], Intra IIT Data Analytics**: Predicted future sales using Neural Ensemble achieving 0.1 MAPE score *2023*
- **Silver [300+ contenders], Open IIT Product Design**: Innovated a product to rectify the spiralling back problems in society *2022*
- **Silver [1600+ contenders], Tradex**: Executed a dynamic algorithmic trading strategy that gave out 34.1% return in 2 weeks *2022*
- **Silver [300+ contenders], Open IIT Product Design**: Designed an innovative ₹5 ball pen that consumed 99.5% lesser plastic *2021*