

EDUCATION

- **B.Tech** in Civil Engineering from **IIT Bombay** (completed in **three & half years**); CGPA: 7.47/10 [17]
- Intermediate from CCHS(CBSE), Jaipur with **89.4%**; Secondary from AVM(RBSE), Jaipur with **87.5%** [10-12]

PROFESSIONAL & RESEARCH EXPERIENCE

- Quant Research Analyst** | Smallcase Technologies, Bengaluru [Mar'19-Present]
- Built a framework in **Python** from scratch for end to end strategy backtesting solution for Indian equities datasets
 - Applied **GMM** and triple barrier method for systematic capital allocation between equity, gold and liquid ETFs using **scikit-learn** in python; Strategy outperformed AWI(most bought portfolio on smallcase) by **~3%** annually
 - Built a **momentum** portfolio using **prospect theory** of stocks's return; beat existing portfolio by **~2%** annually
 - Built an age specific **retirement** portfolio using minimum volatility capital allocation between ETFs; XIRR **~12%**
- Quant Research Analyst** | Quant One Technologies, Kolkata [Aug'17-Dec'18]
- Initiated & conceptualized a quant plus fundamental research approach in the fund*
- Built a framework in **Java** to create and analyze factors with integration of different data sets on US equities
 - Reduced volatility by **0.5%** of a live momentum strategy(**~3M USD** deployed capital) with fundamental filters
 - Achieved a **sharpe of greater than 1** on backtested result of long-short strategy with monthly rebalancing
 - Explored **regression & tree based models** to analyze the predictability of accounting ratios on monthly returns
- Quant Risk Intern** | Quant One Technologies, Kolkata [Feb'17-Jul'17]
- Received full time employment offer*
- Built a **risk management system** from scratch integrating various modules of portfolio analysis and optimization
 - Analysed the performance of production strategies for 4 statistical moments using non normal **simulation** in **Java**
 - Applied systematic **capital allocation** techniques (e.g. Kelly, CPPI, Markowitz, etc.) & optimization algorithms controlling for different **risk constraints** (e.g. Volatility, Drawdown, Value at risk, etc.) using nloptr in **R**
- Research Intern** | Centre for Analytical Finance - ISB, Hyderabad [May'16-Jul'16]
- Conferred Letter of Recommendation by Sr. Associate Director of NSE-ISB Lab*
- Validated **accounting** based investing strategies of F-score & G-score with consistent excess return over Nifty 50
 - Observed return reversal & trading volume effect on momentum; obtained consistent results with US market findings
 - Analyzed the applicability of **fama-french** 3-factor model & betting against beta strategy on BSE listed companies

INDUSTRIAL CERTIFICATION

- Completed **NISM-Series-XV: Research Analyst** Certification Examination [19]
- Secured **Bronze level** in Summer websim challenge, WorldQuant with **64th** rank overall India [16]
- Received **Bloomberg** Market Concepts certification; completed Basics of Bloomberg terminal [16]
- Achieved a score of 93% to complete **Thomson Reuters** product certification on **EIKON**-version4 [16]
- **Six Sigma** Green Belt by KPMG; performed techniques of DMAIC methodology using **MINITAB** [17]

RESEARCH PROJECT

- Real Time Computation of Precipitable Water Vapour (PWV) using GPS** [May'15-Jul'15]
- Guide: Prof. Raaj Ramsankaran, Department of Civil Engineering, IIT Bombay*
- Estimated PWV by processing the data obtained from IITB GPS station and 4 IGS stations using **GAMIT**
 - Developed a **MATLAB** algorithm for processed PWV to analyze & compare it with Radiosonde data from Met.Dep.
 - Achieved **5% improvement** in accuracy of PWV estimation by reducing interval length in GAMIT processing

SCHOLASTIC AND CO CURRICULAR ACHIEVEMENTS

- Part of **Institute Kho-Kho Team** (12 out of 5000) which represented IITB at Spardha, IIT-BHU [14]
- Negotiated kind deals worth **~1 Lakh INR** as a Marketing Coordinator of Institute Cultural Festival [14]
- Secured **2nd** in Robotics Challenge & **3rd** in 'Physx' competition organized by Institute technical Body [15]
- Awarded Technical Color (**top 1%**) for excellent contribution in hostel technical activities [15]
- Negotiated deals worth of **~10 Lakh INR** funding for department festival festival as a sponsorship head [16]

Manu