THARUN KUMAR REDDY MANDADI

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Summary

Valuations Specialist with 5 years of full-time experience in financial services, actively seeking summer 2025 internship opportunities in financial services. Currently pursuing master's degree in Financial Mathematics. Experienced in complex securities valuation, derivatives valuation, and interest rate modelling with Deloitte and EY. A quick learner, ambitious and driven to succeed with strong analytical skills.

Education

North Carolina State University (NCSU) — **Raleigh, US**
Master of Financial Mathematics — *Dec 2025*

Birla Institute of Technology and Science, Pilani (BITS Pilani) — **Hyderabad, India**
Master of Science (Hons) in Mathematics and Bachelor of Engineering (Hons) in Civil — *Jun 2019*

Relevant Coursework: Stochastic Calculus for Finance, Machine Learning for Finance, Options and Derivative Pricing, Applied Timeseries, Fundamentals of Statistical Inference, Monte Carlo Methods Differential Equations, Numerical Analysis, Probability & Statistics, Optimization, Discrete Mathematics, Cryptography, Number Theory, Data Structures & Algorithms, C programming, Artificial Intelligence

Technical Skills

Finance Tools: Bloomberg Terminal, Reuters, S&P Capital IQ, Super Derivatives, @Risk, FINCAD
Programming Skills: Python, VBA, MATLAB, C++, R. *Other Computer Skills*: Microsoft Office Suite including Advanced Excel

Work Experience & Internships

Deloitte US-India (USI) – Risk and Financial Advisory — **Hyderabad, India**
Senior Consultant, Complex Securities, Valuation Modeling and Financial Advisory — *May 2021 – Aug 2024*

- Collaborated with senior management in the US to provide valuation and financial consulting for financing, tax planning, financial reporting, and audit valuation reviews. Additionally, managed client relationships and ensured seamless client interactions.
- Develop complex models to provide valuation advisory and valuation review across multiple asset classes, including equity, fixed income and derivatives. Assisted on multiple multibillion private company acquisitions, initial public offerings, mergers and reverse mergers transactions.
- Areas of focus included IRC 409A, ASC 815 (derivative instruments and hedging activities), ASC 718 (accounting for stock compensation), ASC 842 (leases, IBRs – incremental borrowing rates), ASC 805 (business combination purchase accounting), ASC 820 (Fair Value Measurement), earn-out liability valuations, loan guarantees, private equity, SPAC, preferred stocks, warrants, management incentive plans.
- Specialized in the development of model input assumptions, selection of valuation models, including advanced statistical and financial techniques like Black-Scholes-Merton, lattice model, Monte Carlo simulation model, Black–Derman–Toy (BDT) model, Option Pricing model, Credit Rating Analysis model, combination of simulation and allocation model, development of incremental borrowing rates for lease portfolios, and model development to value securities with non-linear payoff to the common units in a complex capital structure setting.
- Led various client engagements, while also facilitating training sessions to support consultants in their professional development.
- Received multiple accolades, including two Outstanding Performance Awards in FY 2022 and FY 2023, for efficiently managing numerous client engagements.

EY GDS – Transaction Advisory Services — **Gurugram, India**
Senior Analyst, Complex Securities, Corporate Finance — *Sep 2019 – May 2021*

- Work with EY US team to provide services on valuation of Debt instruments, Derivatives and Structured products.
- Performed valuation and pricing for FSO team on various engagements related to structured financial products like Loan Pools, Collateralized Loan Obligations (CLOs), Asset-Backed securities (ABS), Credit Linked Notes (CLN).
- Conducted valuation of Loans, Bonds (Amort, Non-Amort, Floating and Fixed), Callable/Puttable Debt, Convertible Debt, Earnouts, Total Shareholder Return, Call Spread FX options, Credit Spread Analysis.
- Provided trainings to team members on mathematics behind BDT model.
- Transitioned BDT model from MATLAB to Python, which has reduced the code run time by 95%.
- Assisted Business Modelling team with VBA development and review.

EY GDS – Advisory — **Bangalore, India**
Intern, Financial Services and Risk Management, Quantitative Advisory — *Jul 2018 – Jun 2019*

- Valuation of derivatives, simulation of asset price paths, yield curve bootstrapping, volatility bootstrapping. equity pricing models, concepts of stochastic calculus, stochastic volatility models.
- Constructed SABR volatility grid for Swaption, IR Caps using calibrated SABR models in python, and used the volatility grids to value Swaptions and IR Caps in python.
- Forward price simulation using Monte Carlo technique on calibrated SABR model.
- Performed independent valuation and documentation of derivative products for international clients using EY proprietary models and other third-party valuation tools.
- Valuation experience in derivative products include FX Forward, IR currency swaps, IR Caps & Floors, Swaptions, Credit default swap, Exotic options.

Academic Projects

- Markowitz Model with Large Simulation and Sensitivity Analysis – *Financial Mathematics* — *NCSU (Aug 2024 – Present)*
- Statistical Study of Gene Expression Microarray Data (Parental age and Autism in Child) – *Statistics* — *BITS Pilani (Jul 2016 – Dec 2016)*
- Rainfall Prediction using ANNs – *Artificial Intelligence* — *BITS Pilani (Jan 2018 – May 2018)*

Extracurriculars and Social Responsibilities

- Represented university in Chess and Snooker in multiple sports festivals, BITS Pilani (2014 – 2017)
- As a member of National Service Scheme at BITS Pilani (2014 – 2017), was involved in various social service activities like managing blood donation camp, educating children at orphanage schools in city.