

# ABHISHEK TUTEJA

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## SUMMARY

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Computer Science graduate student (GPA 4.0) with 2+ years at Deloitte performing data validation, reconciliation, and process testing for financial trading systems. Strong in Python, SQL, statistics, and machine learning. Currently building depth in derivatives pricing, risk metrics, and regulatory compliance (SR 11-7). Seeking roles in model validation, market risk, and data science.

## WORK EXPERIENCE

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### NORTHEASTERN UNIVERSITY

Oakland, CA

Teaching Assistant

Jan 2025 – Present

- Supported programming and data systems coursework, assisting with Python, Java, and SQL-based assignments and labs.
- Evaluated and guided solutions with an emphasis on algorithmic thinking, correctness, and clean system design.

### DELOITTE

Bengaluru, IN

Advisory Analyst

May 2022 – July 2024

- Tested and validated financial transaction processes across SAP S/4HANA migrations for global Agri-trading and oil & gas clients, covering multi-currency, multi-entity, and cross-border workflows.
- Identified and reproduced system defects in dev environments, documenting structured reproduction steps for development teams and verifying post-deployment fixes.
- Drove open defects to near-zero monthly through systematic end-to-end testing of commodity trading and trade-finance workflows across both client engagements.
- Designed and mapped 100+ financial workflows for a prospective client engagement, documenting process logic, decision points, and edge cases.

## PROJECTS

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### PROVA – SR 11-7 MODEL DOCUMENTATION COMPLIANCE TOOL

Dec 2025 – Present

- Built and deployed an automated SR 11-7 compliance assessment tool that evaluates model documentation against all three validation pillars - Conceptual Soundness, Outcomes Analysis, and Ongoing Monitoring - across 20 specific regulatory elements.
- Designed a multi-agent architecture using three concurrent AI agents (one per pillar) with a judge/orchestrator layer for consistency review, automated retry logic, and scoped re-assessment for disputed findings.
- Generates per-element gap identification with evidence citations from source documents, remediation recommendations, and a downloadable PDF compliance report with weighted scoring across all pillars.

### CAPTRACK

Dec 2025 – Present

- Implemented systematic validation framework testing P&L calculation accuracy against known scenarios, documenting model assumptions, edge cases, and limitations.
- Built a trade and portfolio analysis platform that ingests and normalizes broker trade data to construct positions with accurate realized and unrealized P&L across multi-asset, multi-currency portfolios.

## EDUCATION

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### NORTHEASTERN UNIVERSITY

Oakland, CA

Master of Science in Computer Science

Sept 2024 - May 2026 | GPA: 4.00

Relevant Coursework: Algorithms, Database Management Systems, Machine Learning, Foundations of AI, Generative AI

### MANIPAL INSTITUTE OF TECHNOLOGY

Manipal, KA

Bachelor of Technology in Mechanical Engineering (Minor: Data Science)

July 2018 – July 2022

## TECHNICAL SKILLS AND CERTIFICATIONS

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**Quantitative & Statistical Methods:** Probability & Statistics, Linear & Logistic Regression, Time Series Analysis, Monte Carlo Simulation, Model Validation & Cross-Validation, Backtesting Methodology

**Programming:** Python (Pandas, NumPy, scikit-learn, TensorFlow, QuantLib), SQL, R, C, C++

**Machine Learning & AI:** Multi-Agent Orchestration, LLM Prompt Engineering, Document Analysis & Evidence Extraction, RAG Pipelines, Random Forest, XGBoost, Neural Networks, Classification, Clustering

**Finance & Risk:** Derivatives Pricing (Black-Scholes, Greeks), VaR/CVaR, Volatility Modelling, Portfolio Risk Metrics

**Tools & Platforms:** Excel (Advanced), Jupyter Notebooks, Git, SAP S/4HANA, PostgreSQL, MySQL, MongoDB, SAP HANA

**Visualization:** matplotlib, Tableau, Power BI