

Avaneendra Trivedi

Data & Software Engineer · Financial Systems

+91 9098260879 · avaneendra22@gmail.com · India

[LinkedIn](#) · [SSRN](#) · [Google Scholar](#) · [Portfolio](#) · [GitHub](#) · [Substack](#)

Independent quantitative researcher with **11 authored papers** and more than **5,100 SSRN downloads**. Defines each question, sources the filings and market data, builds the model, tests it on withheld data and publishes the result with reproducible code. Software work includes financial data pipelines, APIs and controlled AI analysis. M&A casework covers three-statement modeling, DCF, LBO, accretion and dilution, bid strategy and diligence.

TECHNICAL SKILLS

Programming Python, SQL, TypeScript, JavaScript, pandas, NumPy, FastAPI, Next.js, React, Node.js, Express

Data Engineering ETL, API ingestion, SEC EDGAR, XBRL, PostgreSQL, SQLAlchemy, Prisma, Redis, schema mapping, normalization, JSON, CSV, Excel

Software Engineering Algorithms, object-oriented programming, REST APIs, relational schemas, Docker Compose, Git, pytest

AI Systems OpenAI, Anthropic and Gemini APIs, LLM integration, structured outputs, document parsing, model fallback

Finance Three-statement models, DCF, LBO, comps, accretion and dilution, M&A diligence, scenario analysis, IRR, MOIC, DSCR

FINANCE AND DATA PROJECTS

SEC Filing Data Pipeline and Automated Valuation Models 2026

- Built Python ETL that rate-limits SEC Company Facts, maps US-GAAP XBRL tags through versioned YAML rules, persists normalized PostgreSQL data, calculates TTM multiples, and outputs JSON, Excel DCF models and PDF analyst packs. [Code](#)

Valuation and Market Data Web Application 2025

- Built a TypeScript and Next.js application with REST endpoints for a 1-15 year DCF, Stooq market feeds and PostgreSQL and Prisma scenario CRUD, adding validation, indexed queries, debounced saves and React charts. [Code](#)

Walk-Forward ETF Data and Backtesting Pipeline 2026

- Built a Python and pandas workflow for six ETFs with 504-day training and 63-day unseen test windows, a 5 bp cost, FastAPI run endpoints and isolated JSON and CSV artifacts. [Code](#)

M&A Valuation and Bid Strategy Casework 2025

- Built a driver-based three-statement model and 10-year DCF with \$803M base and \$654M downside enterprise value, then tested accretion, dilution and synergies against a \$650M bid and recommended a \$660-680M ceiling with diligence priorities. [Materials](#)

AI SYSTEMS

AI Investment Research with Fixed Trade Controls 2026

- Integrated OpenAI and optional Anthropic review into a FastAPI and React workflow for diagnostics, memos and proposed trades. Fixed rules enforce symbol, position and order limits plus a kill switch before paper execution. PostgreSQL, Redis, Docker Compose and n8n support scheduled runs, and critical events enter a SHA-256-linked log. [Demo](#)

AI Financial Document Analysis and Tool Routing 2026

- Built a Node.js and Express assistant that parses PDF, DOCX, CSV and JSON, returns structured OpenAI or Gemini analysis and routes results to market, SEC filing, DCF and workspace tools. Deterministic fallback handles model API failure. [Demo](#)

EDUCATION

Thapar Institute of Engineering and Technology · Patiala, India

Sep 2022 - Jun 2026

B.E., Electronics and Computer Engineering · GPA 8.99 / 10

Relevant coursework Corporate Finance, Quantitative Finance, Portfolio Theory, Optimization, Probability and Statistics

LEADERSHIP AND CERTIFICATIONS

- **Leadership** Head Prefect and Red Cross Secretary. Mobilized 5,560 volunteers through seven annual drives across 12 villages
- **International programs** Led four annual programs across seven countries reaching more than 700 students
- **Certifications** McKinsey Forward Program. Financial Engineering and Risk Management, Columbia. Investment Management, HEC Paris and AXA IM. Financial Markets, Yale. Derivative Markets, Futures First Academy

HONORS & AWARDS

- 3x Gold medalist at the National Math Olympiad. Duke of Edinburgh's Award (**Gold**). International English Olympiad (**World Rank 56**).
- Ranked in the **top 0.8% of more than 2.8 million SSRN authors**, with over **5,100+** paper downloads.