

AI In Finance & Accounting Analytics

(From Excel & Data Analytics to Generative AI, AI Agents and Agentic Finance)

Detailed Curriculum with lesson plan

Program Anatomy

Program Duration: 3 Months

Mode: Live Online / Instructor-Led

Live Learning: 60 Hours — 5-6 Hours per Week

Capstone Project: 12 Hours of guided/project work

Overall Learning Engagement: 72 Hours with Capstone Project

Capstone Project Start: Beginning of Month 3

Target Audience:

1. B.Com, BBA, M.Com and commerce students/ Graduates;
2. Students pursuing CA, CMA/ICWA, CS

Level: Foundation → Applied → Career-Oriented

Primary Focus: Finance, Accounting, Analytics, AI, Generative AI, AI Agents and Agentic Process Automation

1. Program Overview

The AI-Powered Finance & Accounting Analytics program is a three-month, career-oriented professional program designed to prepare commerce, accounting and finance students for the rapidly evolving AI-enabled Finance Function.

Traditional finance careers are increasingly moving beyond bookkeeping, spreadsheet preparation and routine reporting toward data-driven financial analysis, intelligent forecasting, automated reporting, AI-assisted decision-making and autonomous finance workflows.

The program therefore develops capabilities progressively across seven interconnected areas: Finance & Accounting → Data Analytics → Advanced Excel → AI/ML Fundamentals → Generative AI → AI Agents → Agentic AI & Automation

Students will learn not merely what AI technologies are, but how to apply them to practical finance and accounting problems such as:

- Financial statement analysis
- Budget vs. actual variance analysis
- Revenue and expense analytics
- Working capital analysis
- Accounts receivable and payable analytics
- Cash-flow forecasting
- Financial risk identification
- Customer and transaction analytics
- Fraud/anomaly detection concepts
- Management reporting
- Financial planning and analysis
- Audit and compliance support
- Automated finance workflows
- AI-assisted management decision support

The program uses finance-focused datasets, Excel exercises, Generative AI tools, AI Agent development and a guided Capstone Project so that participants graduate with demonstrable practical skills rather than only conceptual knowledge.

2. Program Objectives

By the end of the program, participants should be able to:

- Develop strong Finance Analytics capabilities by understanding data, descriptive statistics, financial KPIs, analytical thinking and data-driven decision-making.
- Use Advanced Excel for Finance and Accounting Analytics, including financial modelling, PivotTables, dashboards, lookup functions, analytical functions, scenario analysis and management reporting.
- Understand fundamental AI, Machine Learning, Deep Learning and NLP concepts and identify appropriate finance problems for rule-based, statistical and data-driven AI solutions.
- Apply Generative AI, AI Agents and Agentic AI to finance activities such as analysis, reporting, budgeting, reconciliation, audit support, financial research and workflow automation.
- Solve a real-world Finance/Accounting problem through a Capstone Project, developing an industry-oriented portfolio project relevant to corporate finance, manufacturing, BFSI, financial services and professional accounting/CA practices.

3. Program Delivery Pedagogy

- Concept → Demonstration → Lab → Business Application: Every major concept will be connected with a practical Finance or Accounting use case.
- Hands-on Learning: Extensive use of Excel, finance datasets, Generative AI platforms, no-code/low-code AI tools and AI Agent development environments.
- Case-Based Learning: Corporate finance, manufacturing finance, banking, financial services, audit, taxation/accounting practice and management reporting scenarios will be incorporated.
- Project-Based Learning: Capstone projects will begin from Month 2, enabling participants to progressively apply Data Analytics, Excel, GenAI and AI Agent concepts to an industry problem.

4. Eligibility Criteria

The program is suitable for:

- B.Com / B.Com (Hons.) students
- BBA / BMS students, particularly Finance specialisations
- M.Com and other postgraduate commerce students
- Students pursuing CA Foundation / Intermediate
- Students pursuing CMA/ICWA / CFA / CS
- Students pursuing Banking, Insurance, Financial Services, FinTech or Accounting programs
- Recent commerce/finance graduates seeking AI-oriented finance careers

Prerequisites: Basic understanding of accounting and finance is desirable. No prior programming, Machine Learning or Artificial Intelligence experience is required.

5. Program Architecture

Month	Learning Theme	Live Hours	Capstone
Section A	Finance Analytics, Excel, Statistics & Foundations of AI/M	24	–
	MODULE 1 — Fundamentals of Data Analytics for Finance	4	

	MODULE 2 — Data Analytics Using Excel for Finance & Accounting	12	
	MODULE 3 — Statistics, AI, ML, DL & NLP Fundamentals for Finance	8	
Section B	AI/ML Applications + Generative AI in Finance	24	
	MODULE 4 — Generative AI for Finance & Accounting	12	
	MODULE 5 — AI Agents for Finance Functions	12	Capstone Project begins
Section C	AI Agents, Agentic AI, Finance Automation & Integration	12	
	MODULE 6 — Agentic AI & Intelligent Finance Process Automation	12	
	CAPSTONE PROJECT		Capstone completion - 12 Hours
Total		60 Hours	12 Hours

The program follows a progression from Data → Analytics → Prediction → Generation → Agents → Automation → Business Transformation.

6. Detailed Module-Wise Curriculum

MODULE 1 — Fundamentals of Data Analytics for Finance

Duration: 4 Hours

Session Objectives

Participants will:

1. Understand the role of data and analytics in modern Finance and Accounting.
2. Learn fundamental analytical concepts, financial KPIs and descriptive statistics.
3. Develop the ability to convert finance data into observations, insights and business decisions.

Topics

- What is Data Analytics?
- Data → Information → Insight → Decision
- Descriptive, Diagnostic, Predictive and Prescriptive Analytics
- Structured vs. unstructured financial data

- Data types and variables
- Data quality fundamentals
- Mean, median, mode
- Variance and standard deviation
- Percentiles, Correlation, Trends and patterns
- Outliers
- Introduction to Exploratory Data Analysis (EDA)
- Financial KPIs and management metrics

Finance Applications

Revenue analysis, profitability analysis, cost analytics, expense analysis, working capital analytics and budget variance analysis.

Lab

Finance Analytics Lab: Perform EDA on a corporate finance dataset and identify five meaningful financial insights.

MODULE 2 — Data Analytics Using Excel for Finance & Accounting

Duration: 8 Hours

Session Objectives

1. Develop practical Excel capabilities required for Finance Analytics.
2. Build analytical reports and management dashboards.
3. Apply Excel functions to solve common financial and accounting problems.

Topics

Excel Analytics Fundamentals

- Data cleaning and preparation
- Tables and structured references
- Sorting and filtering
- Conditional formatting
- Data validation

Finance Functions

- IF / IFS
- SUMIF / SUMIFS
- COUNTIF / COUNTIFS
- XLOOKUP
- INDEX / MATCH
- Date and time functions
- Financial and statistical functions

Analytics

- PivotTables
- PivotCharts
- What-if Analysis
- Goal Seek
- Scenario Manager
- Sensitivity analysis
- Trend analysis
- Forecasting concepts

Finance Dashboarding

- Revenue dashboard
- Cost dashboard
- Profitability dashboard
- Budget vs. Actual dashboard
- Cash-flow dashboard
- Receivables ageing dashboard

Labs

Lab 1: Financial Statement Analytics

Lab 2: Budget vs. Actual Variance Analysis

Lab 3: Working Capital & Receivables Analytics

Lab 4: Management Finance Dashboard

MODULE 3 — Statistics, AI, ML, DL & NLP Fundamentals for Finance

Duration: 8 Hours

Session Objectives

1. Understand the journey from Rule-Based AI to Data-Driven AI.
2. Develop an intuitive understanding of major Machine Learning algorithms.
3. Identify which AI/ML approach fits different Finance problems.

Topics

From Traditional Automation to AI

Rule-Based Systems → Statistical Models → Machine Learning → Deep Learning → Generative AI → AI Agents → Agentic AI

Statistics for AI

- Population vs. sample
- Probability fundamentals
- Correlation vs. causation
- Regression concepts
- Training and testing data

Machine Learning

Unsupervised Learning

- Clustering
- Customer/transaction segmentation
- Anomaly identification

Deep Learning

- Neural network fundamentals
- Input, hidden and output layers
- Why Deep Learning is different from traditional ML

NLP

- Text classification
- Sentiment analysis
- Information extraction
- Financial document analytics

Finance Use Cases

Problem	Possible AI Approach
Revenue forecasting	Regression / Time Series
Loan default	Classification
Customer segmentation	Clustering
Suspicious transactions	Anomaly Detection
Invoice/document analysis	NLP
Financial document intelligence	NLP / GenAI

Lab

- Build or demonstrate a simple financial prediction/classification model using a no-code or low-code environment and interpret the business results.

MODULE 4 — Generative AI for Finance & Accounting

Duration: 12 Hours

Session Objectives

1. Understand Generative AI and Large Language Models in a finance context.
2. Learn professional prompting and context engineering for Finance.
3. Use GenAI responsibly for financial analysis, reporting and decision support.

Topics

- What is Generative AI?
- Traditional AI vs. Generative AI
- Understanding LLMs
- Prompt Engineering
- Context Engineering
- Structured/Markdown prompting
- Role, Context, Task, Constraints and Output Format
- Working with financial documents
- Financial data interpretation
- AI-assisted management reporting
- Financial research and summarisation
- Budgeting assistance and Variance explanation
- Audit-document analysis
- Policy and SOP analysis
- Management commentary generation
- Responsible AI in Finance
- Hallucination and validation
- Confidential financial information
- Human-in-the-loop controls

Labs

Lab 1: GenAI Financial Analyst

Analyse financial data and generate management observations.

Lab 2: AI-Powered Variance Analyst

Generate structured explanations for Budget vs. Actual variations.

Lab 3: AI-Assisted Financial Report

Convert financial information into a management-level report.

MODULE 5 — AI Agents for Finance Functions

Duration: 12 Hours

Session Objectives

1. Understand the difference between a chatbot, Generative AI application and AI Agent.
2. Design task-specific Finance AI Agents.
3. Develop a basic AI Agent for a selected Finance/Accounting function.

Topics

- What is an AI Agent?
- AI Agent architecture
- Goals and instructions

- Knowledge base
- Tools
- Memory concepts
- Reasoning and workflow concepts
- Input/output design
- Human approval
- Guardrails

Finance Agent Examples

- AI Financial Analyst Agent
- Accounts Receivable Intelligence Agent
- Accounts Payable Review Agent
- Budget Variance Analysis Agent
- Cash-Flow Analysis Agent
- Financial Statement Analysis Agent
- Audit Assistance Agent
- Management Reporting Agent
- Manufacturing Cost Intelligence Agent

Lab

Students create an AI Agent with:

Problem Statement → Agent Role → Instructions → Knowledge Base → Finance Data → Analytical Tasks → Output → Validation Rules.

MODULE 6 — Agentic AI & Intelligent Finance Process Automation

Duration: 12 Hours

Session Objectives

1. Understand the transition from individual AI Agents to Agentic AI workflows.
2. Identify Finance processes suitable for intelligent automation.
3. Design a human-controlled Agentic Finance workflow.

Topics

- AI Agent vs. Agentic AI

Understanding:

User Request → Planning → Data Retrieval → Analysis → Decision/Recommendation → Action → Validation → Reporting

Finance Processes for Agentic Automation

- Accounts Payable
- Accounts Receivable
- Invoice processing

- Reconciliation
- Expense management
- Budget monitoring
- Cash-flow monitoring
- Financial close support
- Audit preparation
- Management reporting
- Compliance checking
- Working capital monitoring

Multi-Agent Finance Architecture

Example:

Data Agent → Validation Agent → Finance Analytics Agent → Risk Agent → Reporting Agent
→ Human Approval

Controls

- Human-in-the-loop
- Financial authorization
- Data privacy
- Audit trails and Explainability
- Access controls
- AI governance
- Responsible AI

Lab

- Design an Agentic Finance Workflow
- Students design an end-to-end intelligent workflow for one Finance process, identifying agents, data, business rules, controls, approvals and expected benefits.

7. Capstone Project — AI-Powered Finance Innovation Project

12 Hours | Starts at Beginning of Month 3

The Capstone Project is designed as the principal **portfolio-building component** of the program.

Students may work individually or in small teams on a Finance/Accounting business problem.

Suggested Capstone Domains

Corporate Finance

- Cash-flow forecasting
- Working capital optimisation
- Revenue forecasting

- Budget variance intelligence
- Profitability analytics

Manufacturing Finance

- Product cost analytics
- Cost variance analysis
- Manufacturing profitability
- Inventory working capital
- Plant finance dashboard
- Procurement spend analytics

BFSI

- Loan default prediction
- Customer segmentation
- Transaction anomaly identification
- Financial-product analytics

CA / Accounting Firms

- AI-assisted audit analytics
- Ledger anomaly analysis
- Invoice intelligence
- GST/tax-data analytics
- Financial statement review
- Client reporting automation

Capstone Deliverables

Each project should contain:

1. Business Problem Statement
2. Business Objectives
3. Finance KPIs
4. Data requirements and Data Dictionary
5. Exploratory Data Analysis
6. Excel Analytics/Dashboard
7. AI/ML opportunity identification
8. Generative AI application
9. Finance AI Agent design
10. Agentic workflow/automation opportunity
11. Business benefits and ROI considerations
12. Risks, controls and Responsible AI considerations
13. Final presentation/demo

8. Twelve-Week Delivery Roadmap

Week	Primary Learning Area	Hours	Capstone
1	Finance Data Analytics Fundamentals	4	–
2	Excel Analytics for Finance	4	–
3	Advanced Excel & Finance Dashboards	8	–
4	Statistics & AI Foundations	4	–
5	ML Applications in Finance	4	Capstone Launch
6	ML/DL/NLP Applications	4	Problem + Data
7	Generative AI Fundamentals	4	EDA/Analytics
8	GenAI Applications in Finance	4	GenAI Component
9	AI Agents for Finance	4	Agent Design
10	Building Finance AI Agents	8	Agent Prototype
11	Agentic AI & Finance Automation	8	Workflow Design
12	Future of AI Finance + Integration	4	Finalisation/Demo
	Total Live Delivery	60	12-Hour Capstone

9. Key Skills to be Acquired by the participants

Students completing the program will develop a distinctive combination of **Finance + Analytics + AI + Automation** skills.

Finance & Analytics Skills

- Financial data analysis • EDA • financial KPI analysis • variance analysis • working capital analytics • financial statement analytics • management reporting • dashboard interpretation.

Technology Skills

- Advanced Excel • analytical dashboards • AI/ML fundamentals • Generative AI • Prompt Engineering • Context Engineering • AI Agent design • Agentic AI workflow design.

AI-for-Finance Skills

- Participants will understand how to:
- Analyse → Predict → Generate → Automate → Recommend**
- while maintaining appropriate financial controls and human oversight.

Professional Skills

- Analytical problem solving
- Data storytelling
- AI-assisted decision-making
- Financial business communication
- Project presentation
- AI governance awareness
- Business-process thinking

10. Career & Placement Opportunities

The program is designed to enhance employability for emerging AI-enabled Finance and Accounting roles, rather than positioning students as pure software developers or data scientists.

Career Opportunity	Relevant Program Skills
Finance Analyst	Excel + Analytics + GenAI
Financial Data Analyst	Analytics + Statistics + AI
FP&A Analyst	Forecasting + Variance Analytics + GenAI
Business Finance Analyst	Finance + Data Analytics
Management Reporting Analyst	Excel + Dashboards + GenAI
Credit/Risk Analyst	Statistics + ML concepts
Audit Analytics Associate	Analytics + AI + GenAI
Accounts Analytics Executive	Excel + Finance Automation
Finance Transformation Analyst	Finance + AI + Process Automation
FinTech Business Analyst	Finance + AI/ML + Agents
AI-enabled Accounting Professional	Accounting + GenAI + Agents
Finance Automation Analyst	AI Agents + Agentic Workflows
AI/Analytics Consultant – Finance	Finance + Analytics + AI
Manufacturing Finance Analyst	Cost + Profitability + Analytics

Potential career pathways include:

The program can therefore complement conventional career tracks in CA/CMA practices, corporate finance, FP&A, banking, insurance, FinTech, NBFCs, consulting, audit, accounting, taxation, shared services/GCCs and manufacturing finance.

11. Program Differentiator

Unlike a conventional course that teaches only Excel, Data Analytics or individual AI tools, this program integrates the complete evolution of the modern Finance professional:

Finance Knowledge



Data & Analytical Thinking



Advanced Excel & Financial Analytics



Statistics & Machine Learning



Generative AI



Finance AI Agents



Agentic AI & Process Automation



Capstone: AI-Powered Finance Solution

This creates a strong **“Finance + Analytics + AI” professional profile** for students entering an increasingly AI-enabled employment market.

12. Program Key Highlight

- **AI-Powered Finance & Accounting Analytics**
- ***From Excel & Financial Analytics to Generative AI, AI Agents and Agentic Finance***
- **72-Hour Applied Learning Journey | 60 Hours Live + 12 Hours Capstone**
- **Learn Finance. Analyse Data. Apply AI. Build Agents. Automate Finance.**

The intended graduate profile is not simply a student who has “learned AI,” but an emerging finance professional who understands where AI creates value, how financial data should be analysed, how AI outputs must be validated, and how human financial judgement and intelligent automation can work together.