

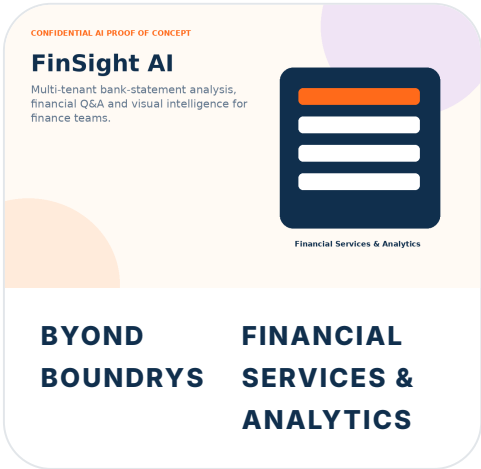
CONFIDENTIAL AI PROOF OF CONCEPT

FinSight AI

Multi-tenant bank-statement analysis, financial Q&A and visual intelligence for finance teams.

FinSight AI was developed as a POC for a CA and finance advisory team that needed a faster, more affordable, and more intelligent way to analyze bank statements and extract financial insights. The team worked with bank statements from individuals, small businesses, and clients across different formats and banking layouts.

Project classification: This proof of concept was developed for a CA and financial advisory team.



INDUSTRY Financial Services & Analytics	CLIENT TYPE CA and financial advisory team	PROJECT STAGE Proof of concept
EVIDENCE Pilot-observed	DELIVERY SCOPE Document extraction, financial analytics, RAG Q&A and dashboards	

Faster conversion of statements into structured data The proof of concept converts bank-statement PDFs into structured transactions and balances for review.	Searchable and traceable transaction records Source metadata supports traceable search and question answering across extracted transactions.	Improved visibility into UPI and cash-flow patterns Classification and dashboards surface UPI, cash-flow, channel and spending patterns.
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Who needed the solution

FinSight AI was developed as a POC for a CA and finance advisory team that needed a faster, more affordable, and more intelligent way to analyze bank statements and extract financial insights. The team worked with bank statements from individuals, small businesses, and clients across different formats and banking layouts. These statements contained transaction data, account details, payment channels, narration fields, balances, UPI transactions, debit/credit flows, and statement periods. Existing workflows were not fully manual, but they still involved significant effort.

02 / CHALLENGE

What needed to change

The main challenge was that bank statement analysis was still time-consuming, fragmented, and difficult for non-technical finance users.

Bank statements arrived in inconsistent PDF formats	Bank statements came in different PDF formats, layouts, date styles, and transaction structures.
Transaction extraction required manual clean-up	Extracting transaction data from PDFs required manual cleanup or semi-manual processing.
Finance teams depended heavily on spreadsheets	CA teams often had to depend on spreadsheets or expensive accounting systems for analysis.
Modern payment flows such as UPI were difficult to classify	Existing systems were not always flexible enough for modern payment flows such as UPI, transfers, digital channels, and mixed transaction narrations.
Users needed natural-language access to financial data	The platform needed to support multiple users or tenants while keeping financial data organized and separated.

03 / WORKFLOW TRANSFORMATION

Before and after

Previous workflow

- Bank statements arrived in inconsistent PDF formats
- Transaction extraction required manual clean-up
- Finance teams depended heavily on spreadsheets
- Modern payment flows such as UPI were difficult to classify
- Users needed natural-language access to financial data

Structured workflow

- Parse and structure statements
- Normalise transactions
- Build financial analytics
- Enable grounded financial Q&A
- Review structured outputs

04 / SOLUTION

How we approached it

We designed FinSight AI as a multi-tenant financial intelligence platform combining document extraction, transaction intelligence, vector search, RAG-based Q&A, metadata enrichment, and real-time analytics dashboards. The solution converted bank statement PDFs into structured, searchable, and analyzable financial data.

01

Parse and structure statements

Extract transactions, balances, dates and source metadata from bank PDFs.

02

Normalise transactions

Handle multi-format dates and classify income, expenses and payment channels.

03

Build financial analytics

Calculate KPIs and present trends through a multi-tenant dashboard.

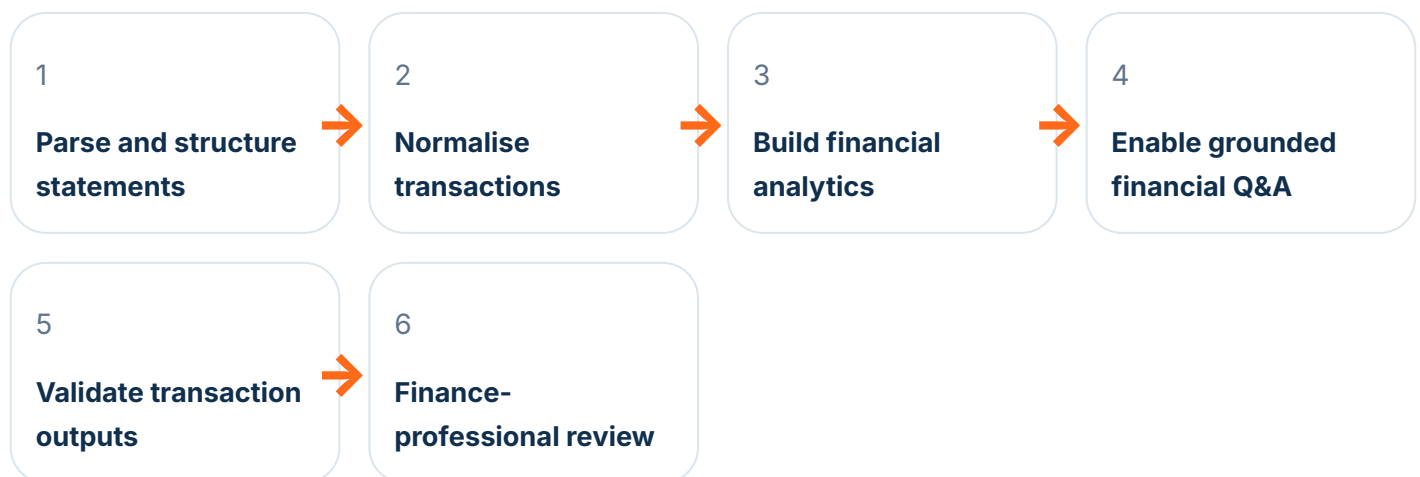
04

Enable grounded financial Q&A

Index structured data and answer questions through retrieval-augmented generation.

05 / EXAMPLE WORKFLOW

From input to reviewable output



06 / DELIVERY SCOPE

What the delivery covered

Business and product workflow

- PDF to Structured Data Pipeline
- Transaction Type Inference Engine
- Metadata Enrichment and Source Traceability

AI, data and automation

- LangChain

Application and cloud engineering

- React
- Python
- FastAPI
- MongoDB
- Docker

Scope boundary

The work was a proof of concept. Production-scale accuracy, time savings and financial-decision impact were outside the validated scope.

07 / ARCHITECTURE AND CONTROLS

How the system is organised

LangChain

React

Python

FastAPI

MongoDB Atlas Vector Search

MongoDB

Docker

TypeScript

Source traceability

Extracted transactions retain statement and metadata context for review.

Structured validation

Dates, balances, debit/credit fields and classifications are normalised before analytics and Q&A.

Human financial review

Dashboards and natural-language answers support finance professionals and do not replace qualified judgement.

Tenant separation

The architecture separates organisational data within the multi-tenant proof of concept.

08 / BUSINESS VALUE

Value observed during validation

1 Faster conversion of statements into structured data

The proof of concept converts bank-statement PDFs into structured transactions and balances for review.

Pilot-observed

2 Searchable and traceable transaction records

Source metadata supports traceable search and question answering across extracted transactions.

Pilot-observed

3 Improved visibility into UPI and cash-flow patterns

Classification and dashboards surface UPI, cash-flow, channel and spending patterns.

Pilot-observed

Accessible dashboards for non-technical finance users

Pilot-observed

Finance users can explore prepared dashboards without manually building spreadsheet charts for the initial review.

5 A multi-tenant foundation for financial intelligence workflows

Pilot-observed

The multi-tenant design demonstrates how the workflow could be extended across organisations.

09 / TECHNOLOGY

Technology and component roles

LA

LangChain

RAG and LLM
application
orchestration

RE

React

Reviewer or
product user
interface

PY

Python

AI, data-
processing and
backend logic

FA

FastAPI

Backend APIs
and workflow
orchestration

MO

MongoDB Atlas Vector Search

Vector retrieval
and semantic
search

MO

MongoDB

Document and
application data
storage

DO

Docker

Containerised
deployment

TY

TypeScript

Typed
application
engineering

RE

Recharts

Analytics
dashboard
visualisation

PD

PDF processing

Document
parsing,
chunking and
normalisation

10 / RELATED WORK

Explore related case studies

INSURANCE & COMPLIANCE

InsureAI

RAG-based policy review, real-time knowledge retrieval and automated policy-gap analysis.

FINANCIAL ADVISORY & INSURANCE

Sugamta

A unified financial-advisory platform for client portfolios, payment schedules, alerts and AI-assisted document extraction.

COMMODITY MARKETS & TRADING

Commodity Forecasting & Market Intelligence

A desktop-first intelligence platform combining market data, technical signals and AI-assisted forecasting.

Working on a similar challenge?

Discuss the workflow, data, integrations and evidence required for a practical first release.