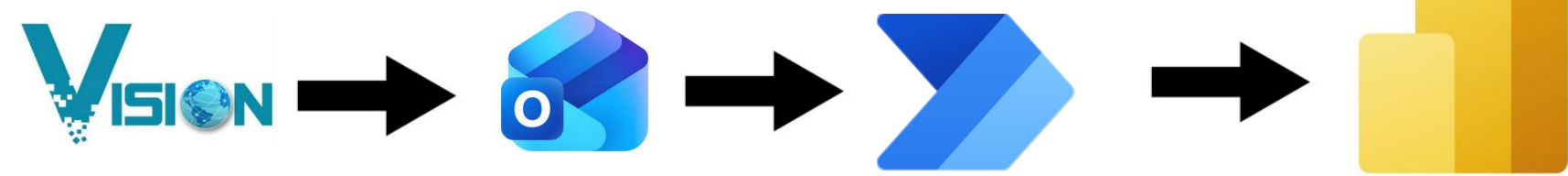


Introduction

- Johnson and Johnson is a global healthcare company specializing in pharmaceuticals and medical technology
- Project objectives
 - Build an interactive budget dashboard to discover and leverage insights
 - Leverage LLM-assisted analysis to support faster resource allocation and financial insights
 - Create an automation process to seamlessly transfer data from IBM Cognos to PowerBI

Fall 25 Project

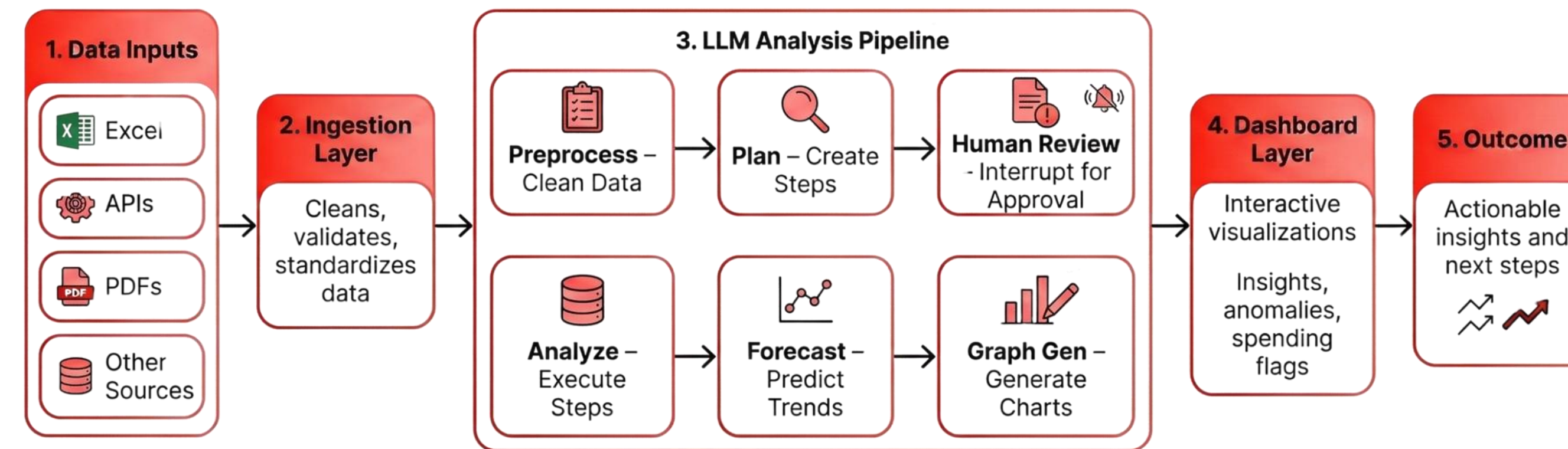
- Automation Pipeline
 - Built pipeline transferring data from IBM Cognos Cloud into Power BI
 - Enabled daily automated dashboard refresh
- Process & Documentation
 - Created documentation outlining the full automation workflow
- Data Quality Improvements
 - Identified and resolved errors in Open PO and Spend Excel reports



Research methodology

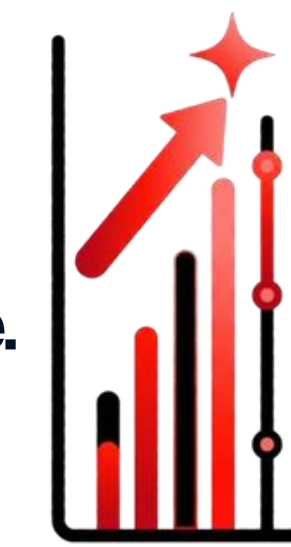


Workflow Diagram

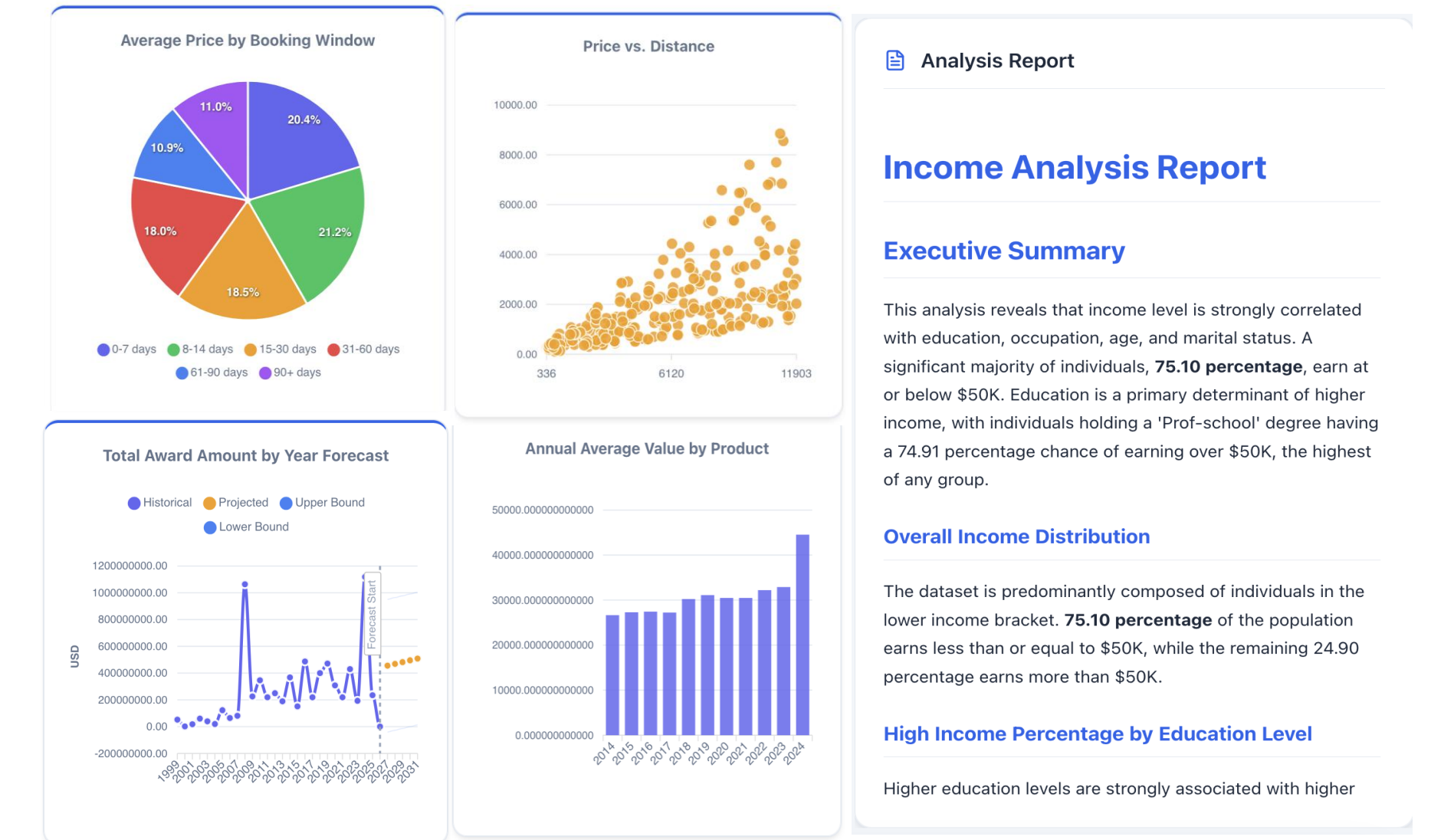


Future Plans

- Real-time analytics that reacts instantly to streaming data.
- Stored insights so LLMs can reuse past analysis with vector database.
- More efficient LLMs for faster, deeper reasoning.
- Auto-generated reports/PPTs

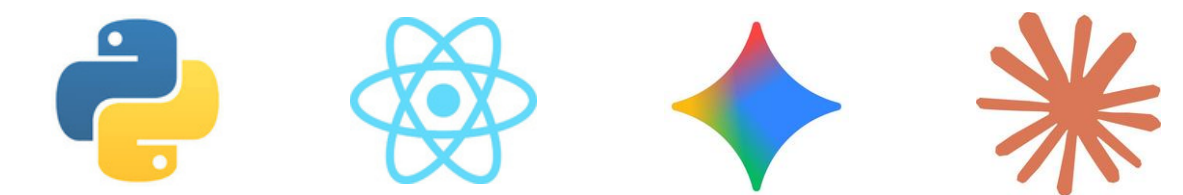


Dashboard Snapshot



Tool Features

- Multi-Agent AI Analytics Platform
 - Built with LangGraph, Flask, and React
 - Accepts natural-language questions about datasets
- LLM Processing Pipeline
 - Stages: preprocessing, checklist generation, analysis, graph generation, forecasting, summary
- Interactive Data Visualizations
 - Automatically generates charts, graphs, and tables
 - Helps users quickly identify patterns and insights
- Forecasting & Trend Analysis
 - Displays projected trends in visual dashboards



Real World Impact



- ~30 seconds to retrieve detailed, actionable insights from data
- Adaptable analysis pipeline for any data domain
- Automated forecasting with built-in confidence metrics
- Natural language queries that enable non-technical users to ask questions in plain English

Conclusion & Learning Outcomes

- Developed an AI-powered tool for automated Exploratory Data Analysis (EDA) that identifies key patterns, trends, and anomalies in datasets. Integrated natural-language to enhance accessibility and support data-driven decision-making.
- Gained hands-on experience using Gemini CLI, Claude, and Python to build an AI-powered data analysis tool for automated exploration and insights.

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