AISF

ARTIFICIAL INTELLIGENCE STUDENT FORUM

PRESENTS

VIT CODE APEX

CODE VERSE HACKATHON 2025

- **Problem Statement Title - Manual Spend Tracking & Commission Calculation**
- **Team Name - Astra**
- **Team Members:**

Harshal Chincholkar

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IDEA TITLE

Proposed Solution :

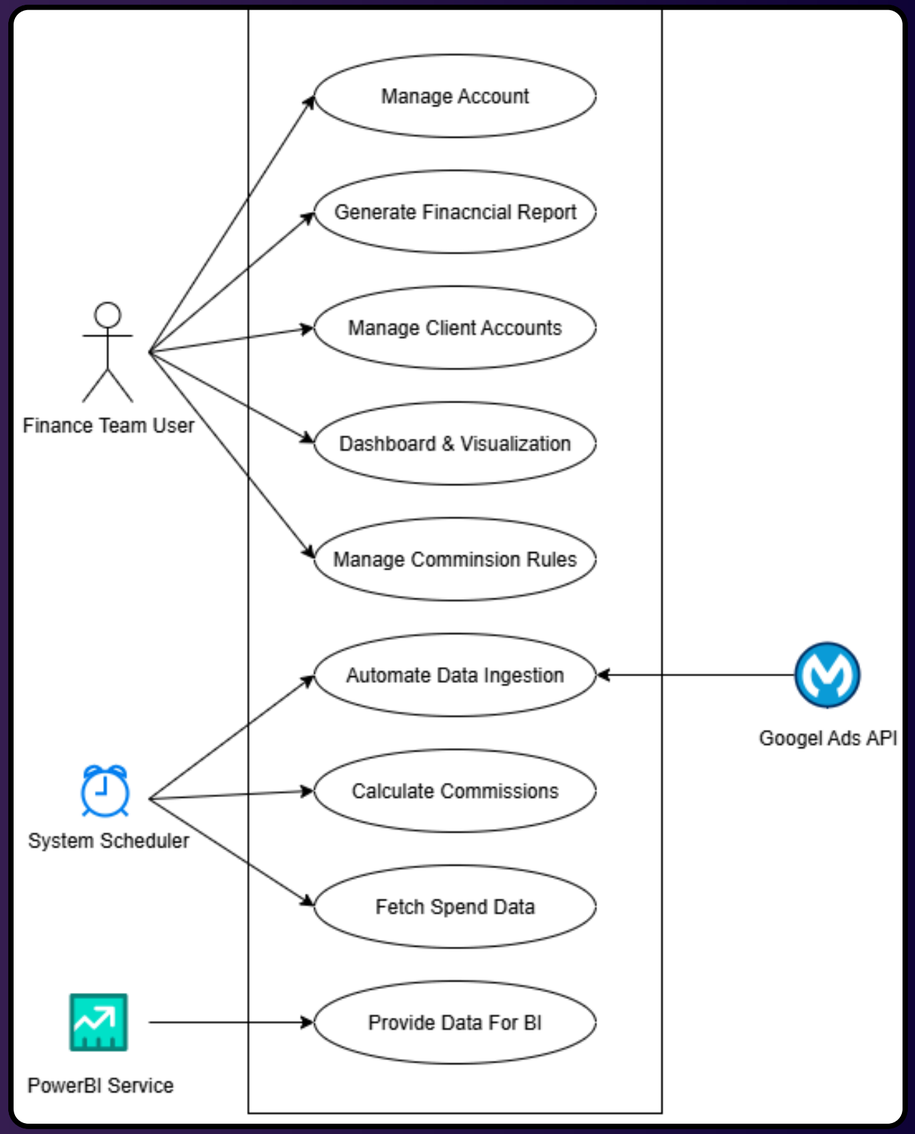
We propose System that integrates directly with Google Ads APIs to fetch daily ad spend data, process it in real time, and automatically calculate client commissions based on predefined business rules. The system will eliminate manual data entry by providing a centralized dashboard for spend insights, automated reconciliation, and instant report generation.

How it Addresses the Problem :

- Eliminates daily manual data entry and reconciliation.
- Automated calculations reduce human mistakes in commission computation.
- Ensures Standardization: Uniform, rule-driven calculations across all clients.
- Finance teams focus on strategic tasks rather than repetitive data entry and saves time.
- Clients receive accurate, timely reports with clear breakdowns which increase trust.

Innovation and Uniqueness :

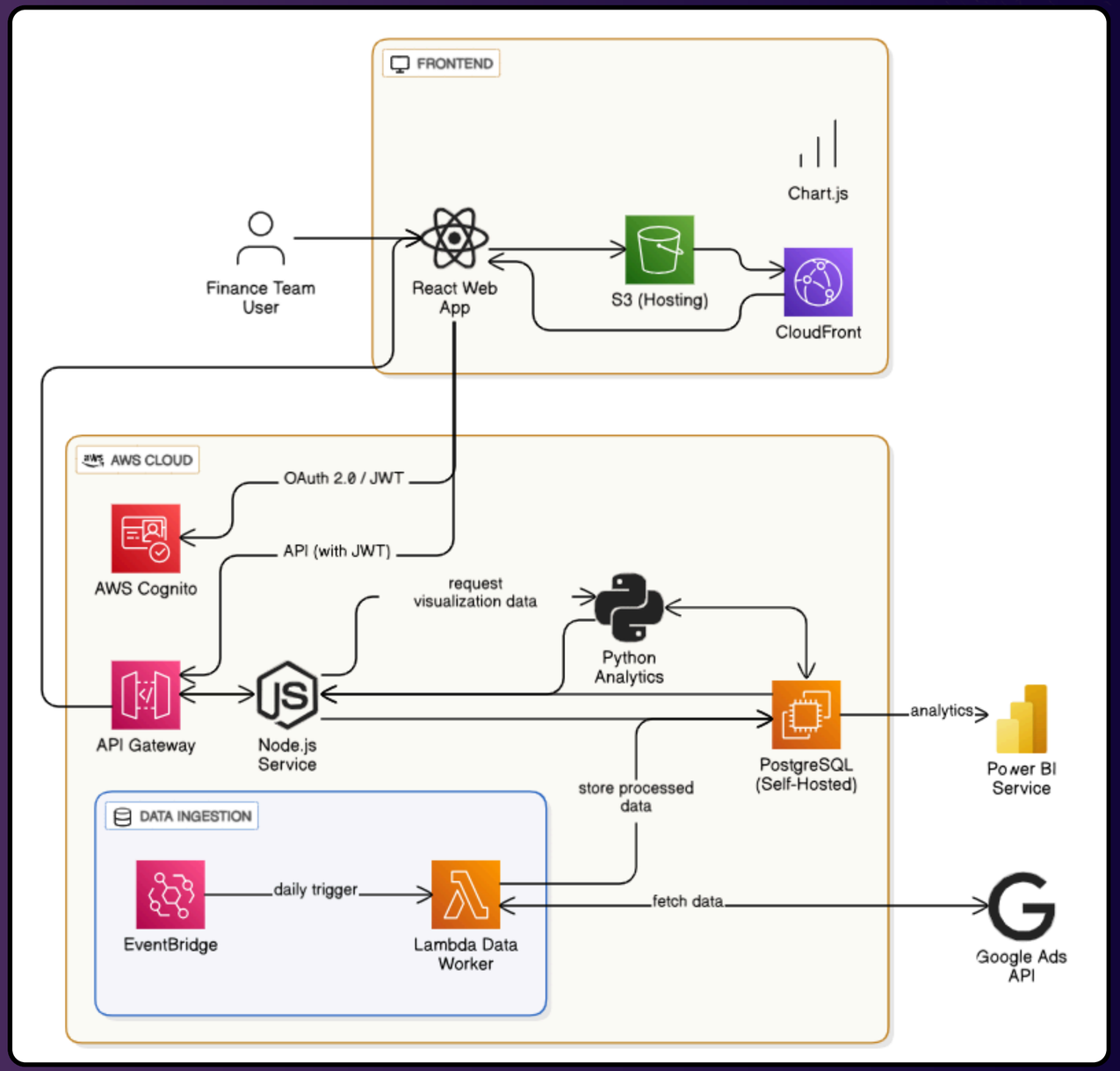
- Real-time integration with ad platforms
- Customizable commission logic
- AI-powered anomaly detection
- Scalable architecture
- Role-based client dashboards
- Predictive forecasting
- Automated client invoicing
- Unified dashboard



USE CASE DIAGRAM

TECHNICAL APPROACH

	Python for building robust backend services and data processing pipelines, JavaScript to create dynamic, interactive, and responsive front-end experiences.
	React for developing modern, component-driven user interfaces, Tailwind CSS to rapidly build custom, responsive designs
	PostgreSQL as a powerful object-relational database system to ensure data integrity, and provide a reliable foundation.
	Power BI for creating in-depth business intelligence reports, Chart.js to embed custom and responsive data visualizations directly into web applications
	OAuth 2.0 and AWS to implement secure, standards-based authentication and authorization, enabling managed user access and protecting backend APIs.



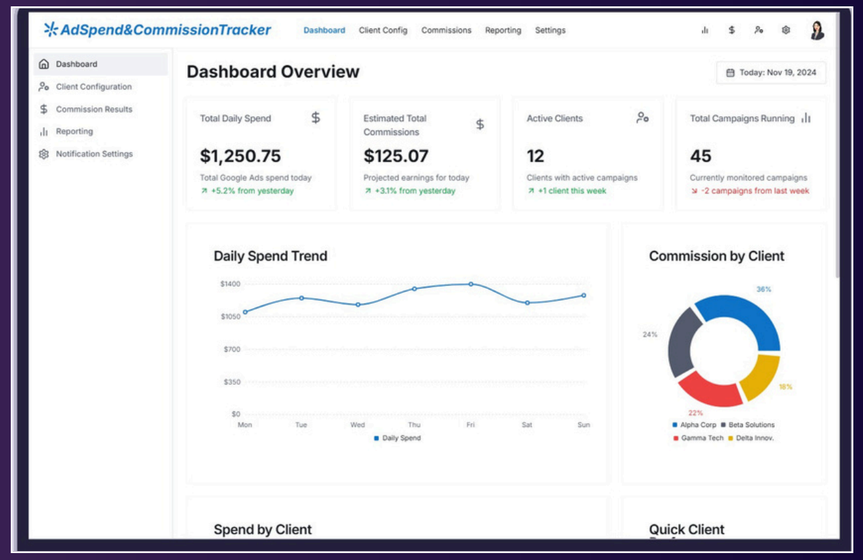
ARCHITECTURE DIAGRAM

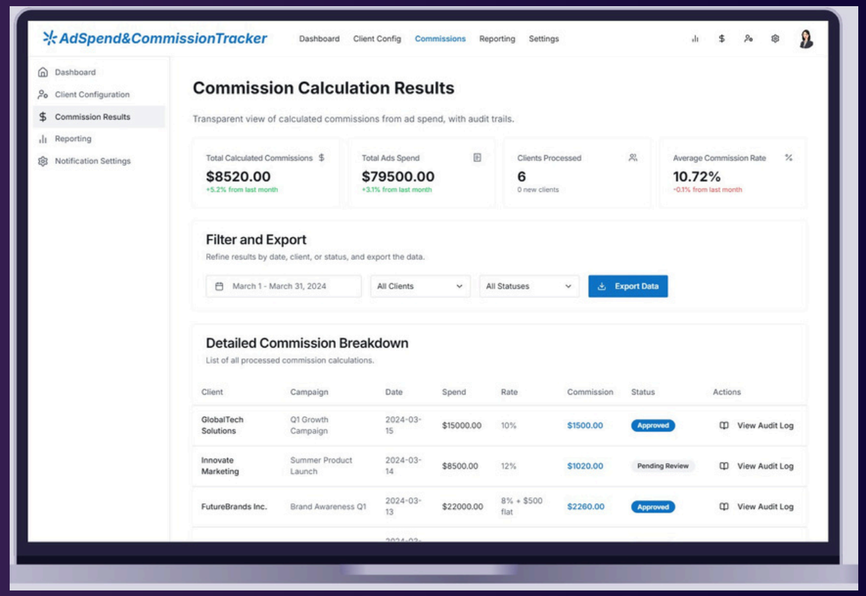
FEASIBILITY AND VIABILITY

PRESENTS

VIT CODE APEX

Feasibility Title	Type	Challenges	Mitigation / Strategies
Google Ads Spend Data Integration	Technical Feasibility	API Limitations: Daily API request quotas might restrict high-volume data pulls.	API Optimization: Use batch requests, caching, and scheduled pulls to manage API limits.
Commission Calculation Automation	Operational Feasibility	Complex Commission Structures: Handling diverse client contracts may increase development complexity.	Flexible Commission Engine: Build modular commission logic to accommodate varied business rules.
Finance Team Workflow Digitization	Operational Feasibility	Adoption Resistance: Finance teams accustomed to spreadsheets may initially resist transition.	Change Management: Provide training, user-friendly interfaces, and phased adoption.
Cost Efficiency & ROI	Economic Feasibility	Data Security & Compliance: Sensitive client data requires strict handling.	Security Measures: Use encryption, access control, and compliance with GDPR/ISO standards.





PROTOTYPE PHOTOS

IMPACT AND BENEFITS

Potential Impact :

Time Savings: Reduce manual work by 70–80%

Accuracy: Near 100% accuracy in reconciliation & calculations

Client Satisfaction: Faster, error-free, transparent reports

Scalability: Extendable to multiple ad platforms beyond Google Ads

Benefits:

Automation: Reduces human dependency & operational risks

Standardized Reporting: Real-time, consistent, and reliable

Efficiency: Finance teams focus on decision-making, not data entry

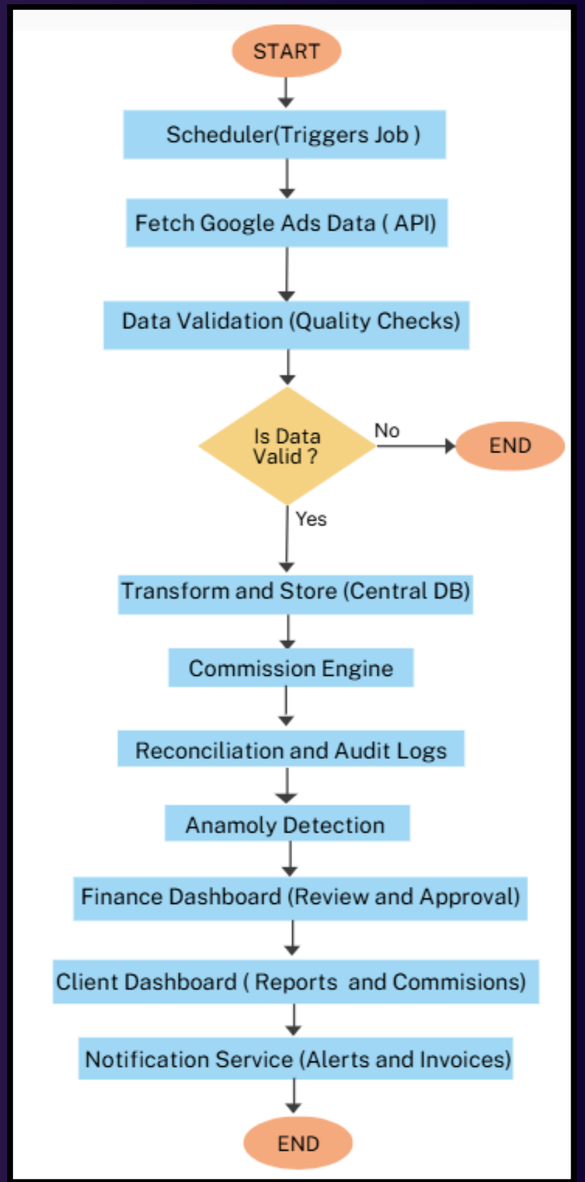
Future-Ready: Scalable for multi-platform ad spend management

Strategic Advantages :

Greater Market Competitiveness

Improved Client Retention & Trust

Enhanced Business Agility



PROCESS FLOW DIAGRAM