CODE VERSE HACKATHON 2025

Problem statement : Automating the workflow from Google Ads to Excel reports for analysis.

Team Name : Team Drop2Dev

Team Members : Aditya Chavan , Riya Mote , Krushna Gavhane

IDEA TITLE

Proposed Solution:- Centralized Real-Time KPI Dashboard with Automated Excel Reporting

We propose building a central dashboard that automatically collects advertising data from Google Ads, Meta Ad library etc organizes it in a database, and presents it in real time. The dashboard will display key performance indicators (KPIs) like clicks, conversions, and costs in easy-to-read charts with filters for campaigns, dates, and regions. Along with this, the system will generate ready-to-use Excel reports containing both summaries and detailed breakdowns, available for one-click download or automatic delivery.

- **How it addresses the problem :-**

  Currently, a lot of time is wasted on manual reporting and data preparation, which is slow and often prone to mistakes. This solution saves time by automating data collection and reporting, ensures accuracy by removing manual errors, and gives clients both instant live insights and clear periodic reports.

- **Innovation and uniqueness of the solution :-**

  Unlike most tools that offer either dashboards or reports, this combines both in a single system. It provides live monitoring with real-time KPIs and also creates professional Excel reports without extra effort. The design is flexible, so it can easily be extended to other platforms like LinkedIn Ads in future.

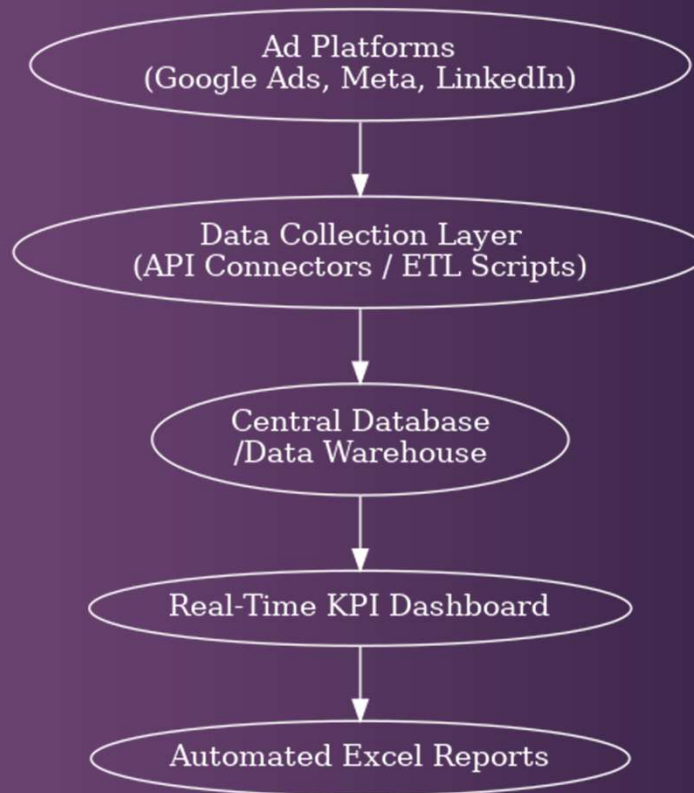# TECHNICAL APPROACH

Technologies to be used :-

- **Data Integration:** Google Ads API, LI for fetching campaign data.

- **Database:** PostgreSQL & Supabase for structured storage.

- **Frontend:** React + Tailwind CSS + Recharts for real-time dashboard.

- **Reporting:** Python (pandas + openpyxl) for automated Excel reports.

- **Delivery:** Email/Google Drive integration for scheduled sharing.

Methodology and process for implementation :-

- **Connect & Collect:** Fetch campaign data via Google Ads API and LinkedIn ad scraper.

- **Store & Organize:** Normalize and save data in PostgreSQL/Firebase.

- **Build Dashboard:** Develop React-based interface with charts, filters, and auto-refresh.

- **Automate Reports:** Use Python scripts to generate and schedule Excel reports.

- **Test & Deploy:** Validate accuracy, then roll out to clients.

- **Scale Up:** Extend the system to other ad platforms (Facebook, LinkedIn).

FlowChart

Dashboard
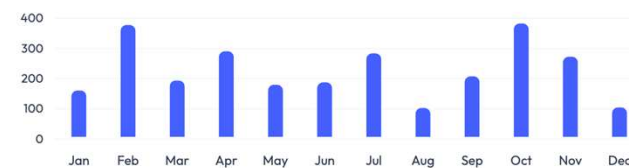
FEASIBILITY AND VIABILITY

Analysis of the feasibility of the idea

- **Technically feasible:** Google Ads API provides reliable campaign data, and tools like React, PostgreSQL/Firebase, and Python are well-tested and widely used.

- **Cost-effective:** Uses mostly open-source technologies, reducing development and maintenance costs.

- **Scalable:** Can easily expand to include more ad platforms (Facebook, LinkedIn) in the future.

Potential challenges and risks

- API limits or downtime could affect real-time data updates.

- Handling large datasets may slow down the dashboard performance.

- Ensuring accuracy across multiple campaigns and platforms.

- Security concerns with storing client data.

Strategies for overcoming these challenges

- Implement caching and fallback mechanisms to handle API downtime.

- Optimize database queries and use efficient data pipelines for large datasets.

- Build thorough testing and validation steps for KPI accuracy.

- Secure data with authentication, encryption, and restricted access.

IMPACT AND BENEFITS

Potential impact of the solution

- Transforms manual, time-consuming reporting into an automated, real-time system.

- Improves decision-making with instant visibility of campaign performance.

- Builds client trust through transparency and standardized reporting.

Benefits of the solution

- **Time savings:** Analysts save several hours per week.

- **Accuracy:** Minimizes human errors in data handling.

- **Transparency:** Clients get both real-time dashboards and professional reports.

- **Scalability:** Can expand to include multiple ad platforms easily

THANK YOU !!!