

## PRODUCT REQUIREMENT DOCUMENT (PRD)

AI Ad Analytics & Content Strategy Platform

Frontend: React • Backend: FastAPI • Storage: Cloud

### 1. Overview

This platform enables users to analyze advertising performance by connecting social media ad accounts or uploading CSV files. AI generates performance reports, insights, strategies, and creative content. Reports delivered via PDF, email, and dashboard.

### 2. Goals & Objectives

Primary: Automate ad analysis and generate actionable insights.

Secondary: Reduce manual reporting, provide strategic guidance, support multiple ad platforms.

### 3. User Types

- Ad Managers
- Business Owners
- Agencies

### 4. Key Features

#### 4.1 Social Account Integration

Supports Meta, X/Twitter, LinkedIn via OAuth. Fetches campaigns, ads, and metrics.

#### 4.2 Manual CSV Upload

Users upload CSV from major ad platforms. Backend stores and parses during report generation.

#### 4.3 AI Analytics Engine

Generates summaries, insights, optimization plans, content calendars, creative prompts, captions, and hashtags.

#### 4.4 Report Delivery

Reports via PDF, email, and dashboard viewer.

## 5. System Architecture

Frontend: React with pages for dashboard, account connect, CSV upload, report generation and viewing.

Backend: FastAPI with endpoints for OAuth, CSV upload, report generation, PDF retrieval, and account management.

## 6. Cloud Storage

Stores CSVs, API snapshots, PDFs, and metadata via S3/Supabase/etc.

## 7. Data Processing Flow

A. Connected Account: Fetch → Normalize → AI → PDF/Report.

B. CSV: Upload → Parse → AI → PDF/Report.

## 8. AI Processing Specification

Input: Metrics JSON. Output: Insights, plans, calendars, prompts, captions.

## 9. PDF Structure

Cover, summary, KPI breakdown, charts, insights, 30-day calendar, creatives, hashtags.

## 10. Security Requirements

Encrypted tokens, signed URLs, rate limiting, read-only scopes, deletion support.

## 11. Non-Functional Requirements

99.5% uptime, scalable, <20s report generation, GDPR-ready, accessible UI.

## 12. Future Improvements

Google Ads, TikTok Ads, team management, scheduled reports, creative CV analysis.