

Product Requirements & Specification Document

Project Name

AdWise - AI Digital Marketing Campaign Builder

Description

AdWise is a SaaS platform leveraging generative AI to design, optimize, and analyze digital marketing campaigns across multiple channels. It generates ad copy, visual suggestions, and performance analytics, supporting secure user management, collaborative editing, and exportable reports for marketing teams and agencies.

1. Goals & Objectives

Goal	Description
AI-Driven Campaign Creation	Automate ad copy and visual suggestion generation
Multi-Channel Support	Enable campaign deployment across major digital channels
Performance Analytics	Provide actionable insights and analytics
Collaboration	Support real-time collaborative editing for teams
Secure User Management	Ensure secure authentication and role-based access
Exportable Reporting	Allow users to export campaign reports in standard formats

2. Key Features

Feature	Description
AI Content Generation	Generate ad copy and visual suggestions using generative AI
Multi-Channel Campaign Builder	Create and manage campaigns for platforms (e.g., Google, Facebook, LinkedIn)
Performance Analytics	Real-time analytics dashboard with key metrics and AI-driven insights
Collaborative Editing	Real-time, multi-user editing with change tracking
User Management	Registration, login, password reset, roles (Admin, Editor, Viewer)
Exportable Reports	Export campaign data and analytics as PDF/CSV

3. User Roles & Permissions

Role	Permissions
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Admin	Full access: manage users, campaigns, analytics, settings
Editor	Create/edit campaigns, collaborate, view analytics, export reports
Viewer	View campaigns and analytics, export reports

4. Functional Requirements

4.1 Campaign Creation

- Input: Campaign objective, target audience, budget, channels
- AI generates: Ad copy, visual suggestions, recommended budget allocation
- User can edit, approve, or regenerate suggestions

4.2 Multi-Channel Management

- Support for Google Ads, Facebook Ads, LinkedIn Ads (MVP)
- Channel-specific content adaptation

4.3 Analytics & Reporting

- Real-time dashboard: impressions, clicks, conversions, spend, ROI
- AI-driven recommendations for optimization
- Export analytics as PDF/CSV

4.4 Collaboration

- Real-time editing with change history
- Commenting and task assignment

4.5 User Management

- Secure registration/login (OAuth 2.0)
- Role-based access control
- Password reset and account management

5. Non-Functional Requirements

Requirement	Specification
Security	Data encryption (at rest & in transit), GDPR
Performance	<2s response time for main user actions
Scalability	Support for 10,000+ concurrent users
Availability	99.9% uptime
Usability	Intuitive UI, onboarding for new users

6. Technical Specifications

Area	Specification
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Frontend	React, TypeScript, Material UI
Backend	Node.js (Express), RESTful API
Database	MongoDB
AI Integration	Generative AI APIs (e.g., OpenAI, Stability AI)
Auth	OAuth 2.0, JWT
Hosting	Cloud-based (AWS/Azure/GCP)
CI/CD	GitHub Actions, Docker

7. APIs & Integrations

API/Integration	Purpose
Generative AI API	Ad copy & visual suggestion generation
Ad Platform APIs	Campaign deployment & analytics (Google, FB, LI)
Email Service	Notifications, password reset

8. UI/UX Requirements

- Responsive, modern dashboard interface
- Guided campaign creation workflow
- Real-time collaboration indicators
- Accessible design (WCAG 2.1 AA)

9. Milestones & Timeline

Milestone	Target Date
Requirements & Design Complete	Week 2
MVP Development Start	Week 3
AI Integration Complete	Week 6
Multi-Channel Support	Week 8
Analytics & Reporting	Week 10
Collaboration Features	Week 12
Beta Release	Week 14
Production Launch	Week 16

10. Acceptance Criteria

- Users can create, edit, and deploy campaigns with AI-generated content

- Real-time analytics and exportable reports are available
 - Multi-user collaboration functions as specified
 - Secure user management and role-based access are enforced
 - System meets performance, security, and usability requirements
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11. Out of Scope

- Native mobile apps (web only for MVP)
 - Direct ad spend management (handled via platform APIs)
 - Custom AI model training (use existing APIs for MVP)
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12. Appendix

Example: Campaign Creation Flow (Pseudocode)

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User submits campaign details
→ System calls AI API for ad copy/visuals
→ User reviews/edits suggestions
→ User selects channels and deploys campaign
→ System tracks performance and updates analytics dashboard
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