

CAPSTONE PROJECT -1

AI-Powered Marketing Content Generator

Internal Guide:
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Topics

- **Problem Statement**
- **Problem Solution**
- **Problem Feasibility**
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 - **Functional Requirements**
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- **Development Tech Stack**
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Problem Statement

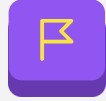


Traditional content creation is time-consuming, expensive, and not scalable.

Challenges:

- High manual effort & costs
- Difficulty maintaining brand consistency
- Limited scalability for SMEs and agencies
- Poor use of analytics and trend data

Problem Solution



AI-Powered Marketing Content Generator

- Automates creations of blog posts, social media, email campaigns, product descriptions, and ads
- Ensures brand alignment and SEO optimization
- Provides real-time content customization
- Reduces costs and turnaround time

Problem Feasibility



- Economic Feasibility

- Technical Feasibility

- Organizational Feasibility

- Operational Feasibility

System Requirements



Functional Requirements

- User-side: Content input customization, export, scheduling
- Admin-side: User management, content monitoring, model updates
- Formats: PDF, DOCX, TXT
- Platforms: WordPress, LinkedIn, Instagram, etc.

Non-Functional Requirements

- Performance: Generate 1000–1500 word blog in 30–40s.
- Security: Role-based access, 2FA, GDPR/IT 2000 ACT compliance.
- Scalability: Handle daily users.
- Usability: accessible UI, Easy Interface.
- Maintainability: Modular design, regular updates.

Roles & Responsibilities



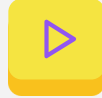
- **AI/ML Engineer:** Model integration and optimization.
- **Backend Developer:** API and database management.
- **DevOps Engineer:** CI/CD.
- **Frontend Developer:** User interface and dashboard.
- **Product Owner:** Vision and feature prioritization.
- **Scrum Master:** Process facilitation and sprint management.

Development Tech Stack



- **Backend:** FastAPI (Python), PostgreSQL, Vector DB.
- **AI Engine:** OpenAI GPT-4/Hugging Face, LangChain.
- **Frontend:** Streamlit/Next.js with responsive design.
- **Authentication:** Firebase Auth.

Process Model



Agile Scrum Methodology

Key Points

- Iterative & incremental sprints (2–3 weeks)
- Daily standups, sprint reviews, retrospectives
- Continuous integration & deployment (CI/CD)

Project Timeline Based on Process Model

- MVP: 16–20 weeks
- Sprint 1: Infrastructure setup
- Sprint 2: Content generation
- Sprint 3: Frontend & authentication
- Sprint 4–6: SEO, analytics, testing, deployment

Team ID:53

Thank

You