

Vibe Check AI - Supplementary Documentation

Samsung PRISM GenAI Hackathon 2025

Executive Summary

Vibe Check AI is an innovative social media analytics platform that leverages cutting-edge AI technology to analyze Instagram profiles and generate personalized digital personality insights. The application combines Google's Gemini 2.0 Flash language model with Instagram's official Business API to create witty, Gen Z-style personality summaries and custom memes.

Technical Innovation

AI-Powered Analysis Engine

- Natural Language Processing: Advanced text analysis using Google Gemini 2.0 Flash
- Sentiment Analysis: Multi-dimensional personality trait extraction
- Content Generation: AI-powered meme creation with personalized humor
- Visual Analysis: Color palette and aesthetic preference detection

Robust Architecture

- Fallback Systems: Multi-tier API integration with enhanced demo data
- Error Handling: Comprehensive exception management
- Security: Environment-based configuration and data privacy

Modern User Experience

- Animated Interface: Smooth Framer Motion animations
- Responsive Design: Mobile-first approach with Tailwind CSS
- Interactive Elements: Engaging user interactions and feedback

Business Impact & Use Cases

Target Audience

- Social Media Users: Individuals curious about their digital presence
- Content Creators: Influencers seeking audience insights
- Digital Marketers: Professionals analyzing brand personality
- Researchers: Academics studying digital behavior patterns

Technical Specifications

Backend Architecture

FastAPI Framework

- Google Gemini 2.0 Flash Integration
- Instagram Business API
- Comprehensive Error Handling
- Environment-Based Configuration

Frontend Architecture

React Application

- Framer Motion Animations
- Tailwind CSS Styling
- Responsive Component Design
- State Management with Hooks
- Vite Build System

Technical Skills

- Full-Stack Development: End-to-end application development
- AI/ML Integration: Advanced language model implementation
- API Development: RESTful service architecture
- UI/UX Design: Modern interface design principles

Conclusion

Vibe Check AI represents a significant innovation in social media analytics, combining cutting-edge AI technology with modern web development practices. The application demonstrates technical excellence, user experience innovation, and market potential. The project integrates multiple AI technologies, create engaging user experiences, and build scalable, production-ready applications. With its robust architecture, comprehensive error handling, and modern design principles, Vibe Check AI is positioned to make a significant impact in the social media analytics market.

Contact Information

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Demo: <https://youtu.be/Bs4tvbXKteM>

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