DreamCatch – A Personalized Dream Tracking and Analysis App

1.Objective

DreamCatch is a mobile app designed to help users record, analyze, and understand their dreams while promoting mental wellness. With features like AI-generated dream art, mood tracking, and professional mental health recommendations, DreamCatch provides a personalized experience that bridges self-exploration with visual creativity and support. The app also includes a community aspect, allowing users to gain insights through relevant articles and updates on dream research.

2.Target Audience

DreamCatch is ideal for individuals interested in self-reflection, dream analysis, and mental wellness. It caters to people who want to understand their subconscious, explore the potential meanings of their dreams, and track emotional trends over time. The app is particularly relevant to young adults, mental health enthusiasts, and anyone looking for an interactive way to manage their emotional well-being.

3.Main Features

Dream Recording and AI-Generated Visuals

Users can record dreams through text or voice input. Leveraging NLP, DreamCatch generates visual representations of users' dream content, providing an artistic reflection of their experiences. AI-Generated visuals add a creative dimension to dream tracking, making each entry visually unique and memorable.

Mood Tracking and Emotional Analysis

DreamCatch includes a mood tracking system, allowing users to log their emotional responses to each dream. Over time, the app analyzes these entries to identify emotional patterns, highlighting trends in mood that may be associated with specific dream themes. This feature helps users gain insight into recurring subconscious influences on their mental health.

Personalized Insights and Recommendations

The app offers a personalized dashboard with summaries of mood trends, dream themes, and emotional analysis. DreamCatch also provides users with resources on dream analysis and mental wellness. When abnormal or persistent negative mood trends are detected, the app can suggest nearby mental health professionals using Google Maps integration.

Community and Educational Content

DreamCatch keeps users engaged through a curated feed of articles, tips, and recent research on topics like dream science, lucid dreaming, and mental health. This feature provides users with context and deeper understanding, fostering a supportive community around dream exploration and self-care.

Secure and Customizable User Experience

DreamCatch values privacy, allowing users to securely log in through Google email verification. The app also offers custom settings for notifications, privacy, and data management, giving users control over their experience. Local data caching through Room Database ensures offline access, while Firebase Firestore syncs data across devices for seamless user experience.

Technical Specifications

Tech Stack: Android (Kotlin), Jetpack Compose for modern UI, Firebase for authentication and Firestore database for storing dream entries and mood data.

APIs and Libraries:

Firebase Authentication: For secure user registration and login, with support for Google email verification to enhance account security.

Google Maps API: For locating nearby therapists or mental health professionals when mood trends indicate potential need for intervention.

Natural Language Processing (NLP): For keyword extraction from dream descriptions, aiding in AI art generation and mood analysis.

AI Art Generation API: To transform dream descriptions into creative images, allowing users to visualize and engage with their dreams in a unique way.

Data Storage:

Room Database: Caches dream entries and artwork locally to support offline access and retrieval.

Firebase Firestore: Synchronizes data securely across devices, enabling users to retrieve their records seamlessly.