Secure Mobile Application Project

Messaging & Personal AI Assistant

A React Native solution for private user-to-user chat and secure, local AI interaction using Ollama.

Dual Core Functionality

User-to-User Chat

Facilitates real-time communication between users within the organization or group. Messages are encrypted and stored securely.

Personal AI Assistant
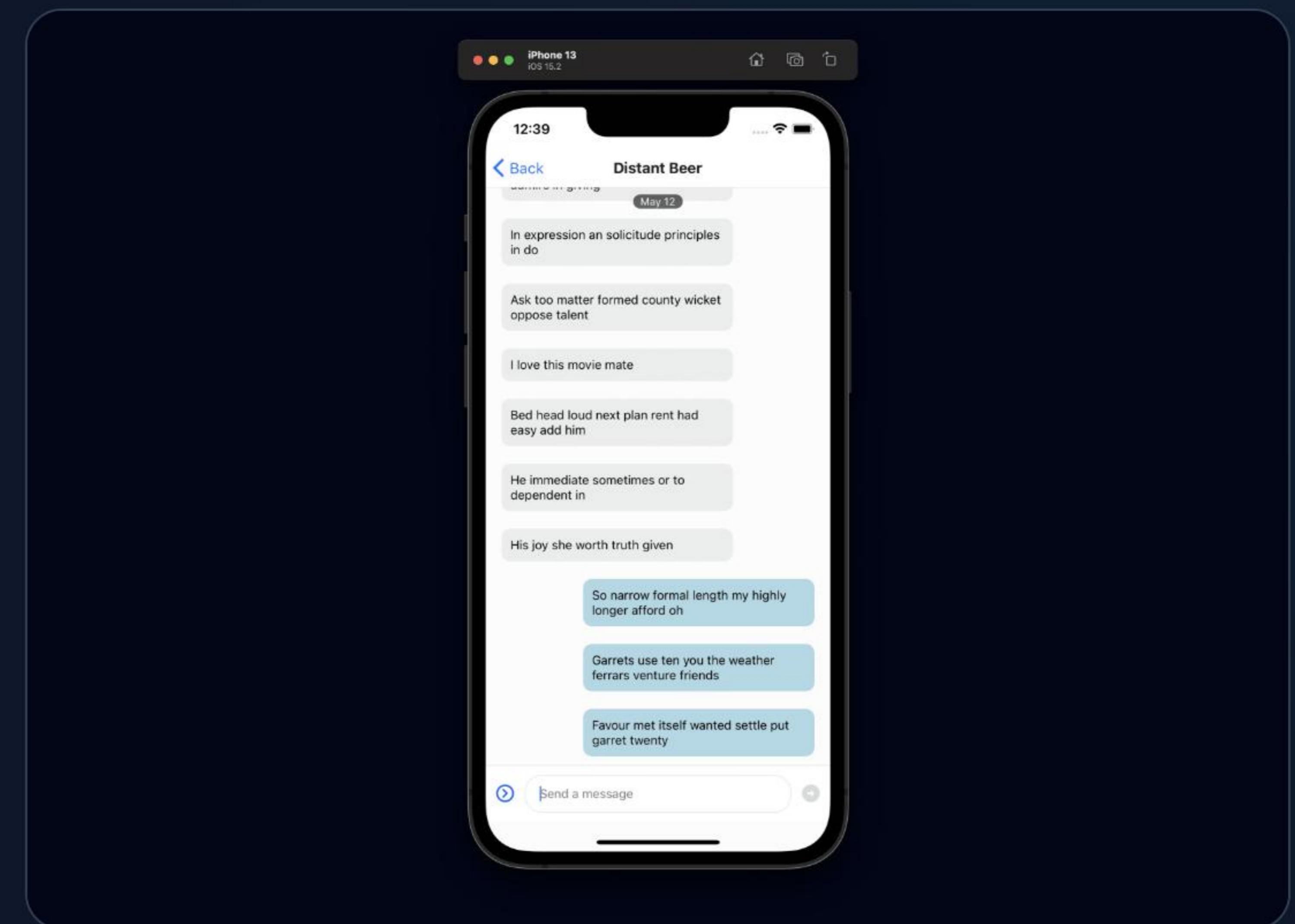
A private assistant for each user to process documents, answer questions, and assist with tasks without external data sharing.

Real-Time User Messaging
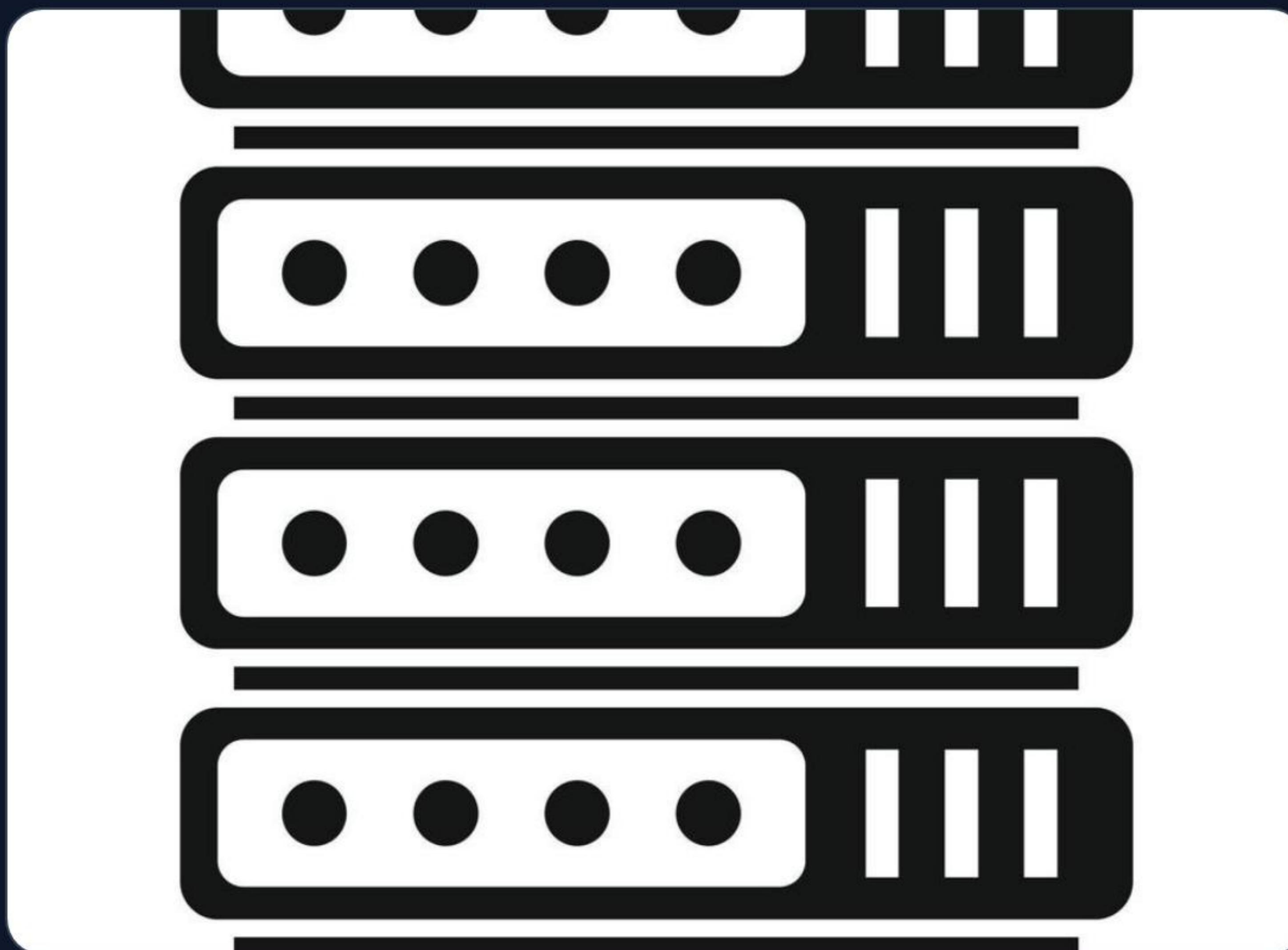
Powered by Appwrite

Our messaging system utilizes **Appwrite** for robust, real-time communication. This ensures users can interact with colleagues as they would in a standard chat application.

✓ Instant message delivery

✓ Secure user authentication

✓ Encrypted conversation history

Private AI with Ollama

Local Hosting, No Data Leakage

Unlike public chatbots that store data on external servers, we use **Ollama** to run AI models locally or on a private server.

This approach guarantees that sensitive organizational data and personal conversations never leave your controlled environment.

Company Use Cases

Internal Support

Quick answers based on company wikis and support docs.

Employee Training

AI-assisted onboarding using policy manuals.

Knowledge Sharing

Secure querying of internal rules and guidelines.

System Architecture

Component	Technology	Role
Frontend	React Native	Cross-platform mobile application
Auth & Messaging	Appwrite	Secure login & Real-time user chat
AI Engine	Ollama	Local LLM execution for privacy
Backend API	FastAPI	Document processing & AI orchestration
Data Storage	MongoDB	Conversation and metadata storage

Secure Knowledge Management

The system allows for secure document uploads (policies, manuals, rules). AI responses are strictly grounded in these provided documents.

Confidential: No data sent to 3rd party AI.

Accurate: Answers based on internal rules.

Secure: Private AI assistance for every employee.
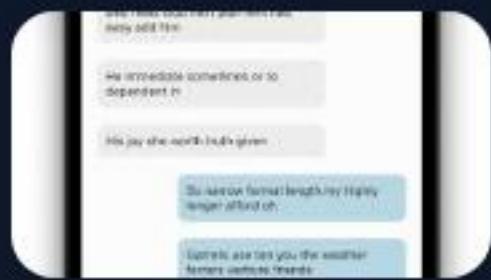
# Questions?

Secure Mobile Messaging & Private AI
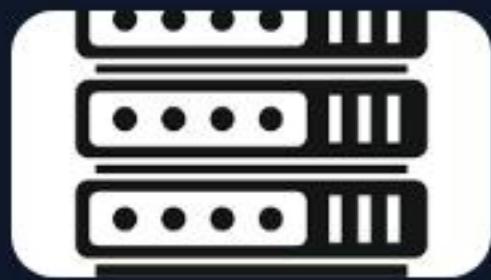
Project Overview | Built with React Native & Ollama

Image Sources

https://getstream.io/assets/chat/tutorials/images/react-native/message-customization-1.png

Source: getstream.io

https://static.vecteezy.com/system/resources/previews/014/655/703/non_2x/server-rack-icon-simple-style-vector.jpg

Source: www.vecteezy.com

https://www.thriveon.net/hubfs/Canva%20images/Canva%20Design%20DAGDRReKCeg.png

Source: blog.thriveon.net