PRD: ChatGenius MVP

Project Overview

ChatGenius is a real-time team communication app designed to streamline collaboration through messaging, channels, and file sharing. The app focuses on providing an intuitive interface with powerful search and notification features to enhance productivity.

User Roles & Core Workflows

1. Individual Users: Send direct messages, join channels, share files, and collaborate with team members i

2. Team Communication: Organize conversations by topic using channels, ensuring focused and relevant

3. Notifications & Search: Stay updated on mentions and announcements, and find past conversations or fi

Technical Foundation

Data Models

1. User: id, name, email, profilePicture, status.

2. Message: id, content, timestamp, senderId, recipientId, channelId.

3. Channel: id, name, description, isPrivate, createdBy.

4. Notification: id, type, messageId, userId, isRead, timestamp.

5. File: id, url, uploadedBy, messageId, channelId.

API Endpoints

1. GET /api/users - Fetch all users.

2. POST /api/messages - Send a message.

3. GET /api/channels - Fetch all channels.

4. POST /api/files/upload - Upload a file.

5. GET /api/search - Perform a search.

Key Components

1. Sidebar: Channel and DM navigation, user status.

2. Message View: Scrollable conversation area with real-time updates.

3. Message Input: Text editor with file upload support.

4. Notifications: Alert bar and notification panel.

5. Search Bar: Universal search functionality.

MVP Launch Requirements

1. User authentication and role management using Clerk.

2. Real-time messaging for DMs and channels with WebSocket support.

3. Basic channel creation, joining, and management features.

4. File upload and retrieval integrated with cloud storage.

5. Notifications for mentions and message replies.

6. Search functionality for messages, channels, and users.

7. Responsive UI with key pages: Login, Dashboard, Channel View, DM View, Search, Notifications.

8. Secure backend with Postgres for data persistence.

9. Error handling and validation for user actions.

10. Deployment-ready system hosted on scalable infrastructure.