Documentation

MindMate

Introduction

- Personalized Mental Health Support
- Enhance mental well-being with AI-driven tools

Completed Features

User Registration and Login

- Registration with secure password hashing
- Session management
- User login with email and password

User Dashboard

- Display user information
- Upload profile picture
- Add additional user information
- Access personalized mental health resources
- Interact with chatbot

Chatbot Interaction

- BERT model for natural language understanding
- Provides personalized recommendations and support

Information Retrieval

- Retrieve articles, exercises, and professional recommendations
- Pre-loaded JSON data files for quick access
- Integration with Google search for additional resources

Audio Processing

- Upload audio files for analysis
- Transcription using Speech Recognition library
- Process transcribed text with the chatbot for responses
- Enhances accessibility for verbal communication

Technologies and Dependencies

- **Flask**: Web framework
- **PyMongo**: MongoDB integration

- **BERT**: Natural language processing model
- **Speech Recognition**: Audio to text transcription
- **BeautifulSoup**: Web scraping for Google search results
- **Hashlib**: Password hashing for security

Project Flow

- **Landing Page** -> Registration or Login
- **Registration** -> Store User Data in MongoDB
- **Login** -> User Dashboard
- **Dashboard** -> Chat with AI Bot, Upload Audio for Analysis
- **Chatbot** -> Analyse Text Input with BERT
- **Audio Analysis** -> Transcribe Audio to Text -> Analyse Text
- **Recommendations** -> Provide Articles, Exercises, Professional Contacts

Future Plans

Enhanced Personalization

- Improve the chatbot's ability to provide more nuanced and specific recommendations
- Use more advanced models for better natural language understanding

Expanded Resources

- Continuously update and expand the database of articles, exercises, and professional contacts
- Include more diverse mental health resources

Advanced Audio Processing

- Improve the accuracy of speech recognition
- Integrate real-time audio processing for live conversations

User Feedback Integration

- Implement a feedback system for users to rate and provide feedback on the recommendations
- Use feedback data to improve the AI model and resource recommendations

Mobile Application

- Develop a mobile app version of MindMate for on-the-go accessibility

Conclusion

- MindMate aims to provide comprehensive, personalized mental health support
- Ongoing improvements and expansions to better serve user needs