**Project: AI-Powered Mock Interview Assistant**

**1. Overview**

The AI-Powered Mock Interview Assistant is a web application designed to help users practice job interviews by generating mock interview questions tailored to specific job descriptions and providing personalized feedback on interview performance. The application aims to assist users in improving their interview skills and increasing their confidence in real-world job interviews.

**2. Key Features**

**2.1 User Authentication and Profile Management**

* Users can sign up, log in, and log out securely.
* Users can create and update their profiles, including personal details, job preferences, and career goals.

**2.2 Job Description Analysis**

* Users can input job descriptions for analysis.
* The system analyzes job descriptions to extract key information such as required skills, qualifications, and responsibilities.

**2.3 Mock Interview Question Generation**

* Based on the analyzed job description, the system generates mock interview questions tailored to the specific job position.
* Mock interview questions cover both technical and behavioral aspects relevant to the job role.

**2.4 Mock Interview Practice Sessions**

* Users can initiate mock interview practice sessions based on the generated questions.
* Users can record their interview responses and receive feedback on their performance.

**2.5 Performance Analysis and Feedback**

* The system analyzes users' mock interview recordings using speech recognition and sentiment analysis algorithms.
* Users receive detailed feedback and performance metrics on their interview responses, highlighting areas for improvement.

**2.6 Community and Peer Feedback (Optional)**

* Users can share their mock interview experiences and provide feedback to peers.
* A rating system allows users to evaluate the helpfulness and quality of mock interview practice sessions.

**3. Technologies and APIs**

* Frontend: React.js
* Backend: Node.js, Express.js
* Database: MongoDB
* OpenAI API for job description analysis and mock interview question generation
* Speech recognition and sentiment analysis libraries for performance analysis

**4. User Roles**

* **Guest**: Can access the landing page and sign up for an account.
* **User**: Can log in, input job descriptions, initiate mock interview practice sessions, and view feedback.

**5. Non-Functional Requirements**

* **Security**: User authentication and sensitive data handling must be secure.
* **Scalability**: The application should be able to handle multiple concurrent users without performance degradation.
* **Usability**: The user interface should be intuitive and user-friendly.

**6. Milestones**

* **Week 1**: Planning and Setup
* **Week 2**: User Authentication and Profile Setup
* **Week 3**: Job Description Analysis and Mock Interview Generation
* **Week 4**: Mock Interview Practice Sessions and Feedback

**7. Constraints**

* Limited time frame (1 month)
* Resource constraints (solo developer)