Functional Requirements

1. **Interactive Career Simulation:**
    - The system must allow users to explore virtual environments replicating real-world job settings.
    - Users must be able to interact with simulated tools, equipment, and tasks specific to each career.
2. **Skill-Based Mini-Games:**
    - The system must include mini-games designed to teach core skills required for various professions.
    - Each mini-game should have multiple difficulty levels and objectives tailored to the chosen career path.
3. **Feedback System:**
    - The system must provide real-time feedback based on user performance in simulations and mini-games.
    - Feedback should include skill evaluations, improvement suggestions, and encouragement messages.
4. **Career Customization:**
    - Users must be able to input their interests, strengths, and goals to customize the career paths available in the simulation.
    - The system should generate personalized career recommendations based on user input.
5. **Progress Tracking:**
    - The system must record user performance data to provide detailed progress reports and analytics.
    - Users must be able to view their skill growth and completed career paths.
6. **Mentor Interaction:**
    - The system should enable users to connect with mentors via audio/video conferencing.
    - Users must be able to schedule mentor sessions and exchange messages through the platform.
7. **Cross-Platform Accessibility:**
    - The system must support VR headsets (e.g., Oculus, HTC Vive) and provide a desktop or mobile alternative for non-VR users.
    - All features must be accessible on supported platforms.
8. **Multi-Career Library:**

- The system must include a library of pre-defined career simulations across diverse industries and professions.
- New career modules must be added periodically.

Non-Functional Requirements

1. **Performance:**
   - The system must load VR environments within 5 seconds for most scenarios.
   - The response time for user interactions in VR should be under 100 milliseconds.
2. **Scalability:**
   - The system must support up to 1,000 concurrent users without significant performance degradation.
   - It should allow for easy addition of new career modules and mini-games.
3. **Usability:**
   - The interface should be intuitive and user-friendly, requiring minimal training for first-time users.
   - Tutorials or walkthroughs must be provided for new users to understand the functionality.
4. **Reliability:**
   - The system must achieve 99.9% uptime, with robust error-handling mechanisms to recover from failures.
   - Regular backups of user progress data must be maintained to prevent data loss.
5. **Security:**
   - User data, including personal information and progress, must be encrypted during storage and transmission.
   - Authentication mechanisms must be implemented to prevent unauthorized access.
6. **Compatibility:**
   - The system must support multiple VR devices and platforms, including desktop and mobile applications.
   - It should be compatible with major operating systems like Windows, macOS, Android, and iOS.
7. **Maintainability:**
   - The codebase should follow standard software development practices to ensure maintainability and scalability.
   - The system must allow for easy updates to add new features or fix bugs.
8. **Accessibility:**

- The platform must adhere to accessibility standards, such as providing alternative text for non-VR users and support for assistive devices.
- The user interface must accommodate users with visual or motor impairments.

9. **Data Analytics:**
   - The system must generate detailed analytics and reports on user performance, engagement, and career exploration trends.
   - These analytics should be available in real-time for administrators and mentors.
10. **Localization:**
    - The platform should support multiple languages to cater to a global user base.
    - Career modules must be culturally sensitive and localized where necessary.