Functional Requirements and Non Functional Requirements ( Immigence )

## **1. Functional Requirements**

(*Ordered by most critical to least critical*)

### **Visa & Residency Tracking (Core Feature)**

* The system shall allow users to enter and save visa details, including type, country, issue date, and expiration date.
* The system shall send **automated email and push notifications** before visa expiration based on user preferences.
* The system shall allow users to upload and securely store immigration documents (e.g., visa, passport scans).
* The system shall provide a dashboard showing visa status, countdown to expiry, and renewal options.

### **User Authentication & Account Management**

* The system shall allow users to register using **email, Google, or Apple authentication**.
* The system shall allow users to log in securely using **password-based or multi-factor authentication (MFA)**.
* The system shall allow users to reset passwords via email verification.
* The system shall store and manage user profiles, including name, nationality, and immigration details.
* The system shall provide **role-based access control** (e.g., regular users vs. immigration consultants).

### **Security & Compliance**

* The system shall encrypt all sensitive user data, including visa details and documents, using **AES-256 encryption**.
* The system shall comply with **GDPR, CCPA, and other relevant data protection regulations**.
* The system shall allow users to **download and delete their data** in compliance with data privacy laws.
* The system shall log all user activities for auditing purposes but **not store personally identifiable logs beyond 30 days**.

### **Real-Time Immigration Policy Updates**

* The system shall **scrape and aggregate immigration policy updates** from government websites.
* The system shall notify users about **relevant changes in visa rules** via a dashboard and email alerts.
* The system shall allow users to filter policy updates by **country and visa type**.

### **Visa Eligibility & Legal Guidance**

* The system shall allow users to input their current visa and residency status.
* The system shall **suggest visa options** based on user eligibility, comparing processing times and costs.
* The system shall provide **step-by-step visa application guidance** based on their selected visa type.
* The system shall generate **a personalized checklist** for each visa application.

### **Visa Success Rate Prediction**

* The system shall analyze past visa trends and estimate the likelihood of approval.
* The system shall provide insights on **common rejection reasons and suggestions for improving approval chances**.
* The system shall allow users to compare success rates for different visa categories.

### **Risk Analysis & "What If" Scenarios**

* The system shall allow users to **simulate different immigration scenarios** (e.g., job change, visa switch).
* The system shall provide **AI-driven insights** on the risks and benefits of different immigration strategies.

## **2. Non-Functional Requirements**

(*Ordered by most critical to least critical*)

### **Security & Privacy**

* The system shall implement **end-to-end encryption** for all sensitive communications.
* The system shall ensure **role-based access control (RBAC)** to restrict unauthorized access.
* The system shall **automatically log out users** after **15 minutes of inactivity**.
* The system shall ensure **data storage follows country-specific regulations** (e.g., UK, US, Canada).

### **Performance & Scalability**

* The system shall support **at least 10,000 concurrent users** without performance degradation.
* The system shall provide **real-time responses** for visa tracking and policy updates within **2 seconds**.
* The system shall store user-uploaded documents efficiently, supporting at least **100,000 documents**.

### **Availability & Reliability**

* The system shall have **99.9% uptime**, ensuring minimal downtime.
* The system shall have a **failover mechanism** to recover from unexpected failures.
* The system shall ensure that all notifications (**email, push**) are **delivered within 1 minute of triggering**.

### **Usability & Accessibility**

* The system shall have a **responsive UI**, working on both desktop and mobile browsers.
* The system shall follow **WCAG 2.1** accessibility standards for visually impaired users.
* The system shall provide an **intuitive and user-friendly interface**, ensuring users can complete key tasks within **3 clicks**.

### **Maintainability & Extensibility**

* The system shall be built using **a microservices architecture**, allowing independent updates to modules.
* The system shall allow **third-party integrations** (e.g., immigration consultants, legal services).
* The system shall provide **comprehensive API documentation** for future enhancements.

### **Compliance & Legal Considerations**

* The system shall **not provide direct legal advice** but only aggregate publicly available information.
* The system shall provide **disclaimers** to ensure users understand they must verify legal information with professionals.
* The system shall ensure compliance with **GDPR, CCPA, and other global privacy laws**.