**1. Introduction**

**1.1 Purpose**

The purpose of this SRS is to define the functional and non-functional requirements for the development of the Neighborhood Evaluation and Scoring System (NESS). NESS is a web-based application that allows users to evaluate and score neighborhoods based on various criteria.

**1.2 Scope**

The NESS system will encompass user registration and authentication, neighborhood data management, a sophisticated scoring algorithm, user preferences, neighborhood comparison, and search and filtering features. It will not facilitate real estate transactions.

**1.3 Definitions, Acronyms, and Abbreviations**

NESS: Neighborhood Evaluation and Scoring System

SRS: Software Requirement Specification

**2. System Description**

**2.1 System Overview**

The NESS system is a web application designed to assist users in making informed decisions about neighborhoods. Users can input their preferences, and the system will calculate and provide scores for different neighborhoods based on those preferences.

**2.2 System Features**

**2.2.1 User Registration and Authentication**

Users must register and log in to access the system.

User profiles will store preferences and scores.

**2.2.2 Neighborhood Data Management**

The system will maintain a database of neighborhood data, including criteria such as safety, education, affordability, healthcare, and more.

**2.2.3 Scoring Algorithm**

The system will implement an advanced scoring algorithm to calculate scores for each neighborhood based on user preferences.

**2.2.4 User Preferences**

Users can set their preferences for criteria weights.

Preferences are adjustable and can be saved.

**2.2.5 Neighborhood Comparison**

Users can compare and rank neighborhoods based on their scores.

**2.2.6 Search and Filtering**

Users can search for neighborhoods based on location, property type, and other parameters.

**3. Functional Requirements**

**3.1 User Registration and Authentication**

Users must register with a valid email address and password.

Users can log in and out of their accounts.

Passwords should be securely stored using encryption.

**3.2 Neighborhood Data Management**

The system should allow administrators to update and maintain the neighborhood database.

**3.3 Scoring Algorithm**

The system must implement a scoring algorithm that takes user preferences into account.

**3.4 User Preferences**

Users should be able to set, edit, and save their preferences for criteria weights.

**3.5 Neighborhood Comparison**

Users should be able to compare and rank neighborhoods based on scores.

**3.6 Search and Filtering**

Users should be able to search and filter neighborhoods based on location, property type, and other parameters.

**4. Non-Functional Requirements**

**4.1 Performance**

The system should respond to user interactions within a reasonable time frame.

The system should handle a large number of concurrent users.

**4.2 Security**

User data must be securely stored and transmitted.

Authentication mechanisms must be robust.

The system should have role-based access control.

**4.3 Usability**

The user interface should be intuitive and user-friendly.

The system should be accessible to people with disabilities.

**4.4 Reliability**

The system should be available 24/7 with minimal downtime for maintenance.

**5. System Constraints**

The system should be compatible with modern web browsers.

The system should be developed using a specific programming language and framework.

**6. Future Enhancements**

Mobile application development for Android and iOS platforms.

Integration with external data sources for real-time information.

Social sharing and community features.

Advanced data analytics and visualization.