**Dating Recommendation Engine**

**Project Overview**

The Dating Recommendation Engine is a web application designed to help users find potential matches based on their preferences and attributes. The application utilizes a recommendation algorithm that prioritizes matches based on gender, age, and shared interests. This project is built using Java and the Spring Boot framework, providing a robust and extensible architecture for future enhancements.

**Features**

* **User Registration**: Users can register with their name, gender, age, and interests.
* **Match Recommendation**: The engine recommends potential matches based on:
  + **Gender Preference**: Users are matched with individuals of the opposite gender.
  + **Age Proximity**: The algorithm prioritizes users who are closest in age.
  + **Interest Matching**: Users with similar interests are ranked higher.
* **RESTful API**: The application exposes a RESTful API for fetching match recommendations.
* **Unit Testing**: The project includes unit tests to ensure the correctness of the recommendation logic.

**Technologies Used**

* **Java**: The primary programming language for the application.
* **Spring Boot**: Framework for building the RESTful web service.
* **Spring Data JPA**: For database interactions and repository management.
* **H2 Database**: An in-memory database for development and testing.
* **JUnit**: For unit testing the application logic.