**Product Requirements Document (PRD) for Bibliophile**

**1. Overview**

**Bibliophile is a comprehensive book recommendation platform designed to provide personalized book suggestions, facilitate discussions, and bridge the gap between books and their movie/series adaptations. It also enables users to test their reading speed and evolve into authors or critics.**

**2. Objectives**

* **AI-Powered Book Recommendations (Collaborative + Content-based Filtering).**
* **Comprehensive Book Database with detailed book and author information.**
* **Community-Driven Engagement with discussions, reviews, and role-based content.**
* **Movie & Series Adaptations connected to books.**
* **Reading Speed Test feature for user engagement.**
* **Users can become Authors or Critics with proper moderation.**

**3. User Roles & Features**

**3.1 User Features**

* **Book Discovery (Search, Filter, Recommendations).**
* **Detailed Book & Author Pages.**
* **User Profiles (with favorite books, discussions, and role-based content).**
* **Reading Speed Test (Interactive modal for testing reading speed).**
* **Discussion Forums (Post, comment, like, and report discussions).**
* **Movies/Series Section (Shows adaptations based on books).**
* **AI-Powered Recommendations (Based on reading history and preferences).**
* **User Role Upgrades (Apply to become an Author or Critic).**
* **Personalized Book Tracking (Progress, Wishlist, Read History).**

**3.2 Admin Features**

* **Manage Books & Authors (Add, Update, Delete Books & Authors).**
* **Approve User Role Requests (Authors & Critics verification).**
* **Moderate Discussions & Reviews (Flagging, Deleting Inappropriate Content).**

**3.3 System Features**

* **GraphQL API for flexible data fetching.**
* **AI Recommendation System for personalized book suggestions.**
* **Authentication with Firebase.**
* **Caching Mechanism (Redis for optimized performance).**
* **SEO Optimization (For better discoverability of books & discussions).**

**4. Pages & Navigation**

**4.1 Public Pages**

* **Home → Personalized book recommendations.**
* **Books List → Search & filter books.**
* **Book Details → Information, reviews, recommendations, buy links.**
* **Authors → List of authors and their works.**
* **Movies/Series → Adaptations of books.**
* **Quotes Collection → Popular book quotes.**
* **Discussion Forums → User-generated book discussions.**
* **Login/Signup → Firebase authentication.**

**4.2 User Dashboard (After Login)**

* **User Profile → Favorite books, reading speed test results.**
* **Book Tracking → Wishlist, progress tracking, completed books.**
* **Discussions → Posts, comments, likes.**
* **Apply for Role Upgrade → Become an Author or Critic.**

**4.3 Admin Panel**

* **Manage Books & Authors → CRUD operations.**
* **Moderate Discussions & Reviews.**
* **Approve/Deny User Role Requests.**

**5. Technology Stack**

**Frontend**

* **Framework: Next.js (TypeScript, React, App Directory)**
* **Styling: Tailwind CSS**
* **State Management: Apollo Client (GraphQL)**
* **Authentication: Firebase Auth**
* **Deployment: Vercel**

**Backend**

* **Framework: Node.js (Express.js + Apollo Server)**
* **Database: MongoDB (MongoDB Atlas, Mongoose ORM)**
* **AI Recommendations: FastAPI (Python) with TensorFlow/Scikit-Learn**
* **Caching: Redis**
* **Hosting: Railway.app or Render.com (Free-tier)**

**DevOps & CI/CD**

* **Version Control: GitHub**
* **CI/CD: GitHub Actions**
* **Process Management: PM2**
* **Reverse Proxy: Nginx (If required for scalability)**

**6. Timeline & Milestones**

1. **Week 1: Set up Next.js frontend, Apollo Client, Tailwind CSS.**
2. **Week 2: Implement GraphQL Backend (MongoDB, Express, Apollo Server).**
3. **Week 3: Integrate Authentication & User Profiles.**
4. **Week 4: Develop Book & Author Pages, Search & Filter.**
5. **Week 5: Build Movies/Series & Reading Speed Test.**
6. **Week 6: Implement AI-powered Book Recommendations.**
7. **Week 7: Launch MVP with CI/CD setup.**

**7. Success Metrics**

* **User Engagement: Number of active users, book searches, and discussions.**
* **AI Effectiveness: Accuracy & relevance of book recommendations.**
* **Community Growth: Number of discussion posts, comments, and role upgrades.**
* **Performance: API response time, caching efficiency.**
* **SEO & Discoverability: Organic traffic and search rankings.**

**8. Conclusion**

**Bibliophile is designed to redefine book discovery and engagement by combining AI-powered recommendations, a vibrant community, and integrations with movies/series adaptations. With an optimized tech stack, a structured development plan, and a clear roadmap, this project aims to create an innovative one-stop platform for bibliophiles worldwide.**