📄 REQUIREMENT ANALYSIS – DocSpot

Seamless Appointment Booking for Health

👥 Team Details

Field	Details
Team ID	LTVIP2025TMID30950
Team Size	2
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1️⃣ Introduction

DocSpot is an intuitive online platform designed to modernize the traditional doctor appointment system.
It streamlines medical consultations by enabling patients to view doctor profiles, check real-time availability, and book appointments easily.
This Requirement Analysis document outlines both the **functional** and **non-functional** expectations that guide the system's architecture and user experience.

2️⃣ Functional Requirements

- 🔹 Secure user registration and login (JWT authentication)
- 🔹 Role-based access (patient / doctor / admin)
- 🔹 Admin dashboard for doctor verification and approvals
- 🔹 Search and filter doctors by specialty, experience, and availability
- 🔹 Appointment booking system with time-slot selection
- 🔹 Patient dashboard with booking history and upcoming appointments
- 🔹 Doctor dashboard to manage availability and patient slots
- 🔹 In-app notifications and email confirmations
- 🔹 Ability to attach basic health history or previous prescriptions

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3️⃣ Non-Functional Requirements

- Responsive and mobile-friendly design
- End-to-end encrypted data transmission using HTTPS
- Cloud-hosted backend with scalable API performance
- Load handling for simultaneous booking requests
- System uptime 99.5% with fallback error handling
- Consistent page load time under 2 seconds
- Minimal training required for end users

4 Tools and Technologies

- **Frontend:** React.js with Tailwind CSS
- **Backend:** Node.js with Express.js
- **Database:** MongoDB (Cloud - Atlas)
- **Authentication:** JWT (JSON Web Tokens)
- **Hosting:** Render / AWS EC2
- **Version Control:** Git and GitHub
- **Testing:** Thunder Client / Postman