

Project Proposal: Pathrise – Smart Job & Internship Portal

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1. Project Title

Pathrise – Smart Job & Internship Portal

2. Problem Statement

Finding relevant job opportunities or internships is often a time-consuming process for students and fresh graduates. Traditional job boards can be cluttered, generic, or not personalized to the user's skills, making it hard to find suitable positions.

Pathrise aims to solve this problem by creating a platform where candidates can explore internships and jobs based on their skills, interests, and location. Employers can post positions, manage applications, and track candidate responses efficiently, making the recruitment process smoother and more effective.

3. System Architecture

Structure:

Frontend → Backend (API) → Database

Stack:

- **Frontend:** React.js with React Router for smooth page navigation

- **Backend:** Node.js + Express.js to handle RESTful APIs
 - **Database:** MongoDB (non-relational)
 - **Authentication:** JWT-based login/signup with role-based access (Candidate, Employer, Admin)
 - **Hosting:**
 - Frontend → **Vercel**
 - Backend → **Render**
 - Database → **MongoDB Atlas**
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4. Key Features

Category	Features
Authentication & Authorization	Secure signup, login, and logout with roles for candidates, employers, and admins
CRUD Operations	Add, view, update, and delete job or internship postings and applications
Search, Filter, Sort & Pagination	Search postings by title, company, or skills; filter by location, type, or salary; sort by date or relevance; paginate long lists
Application Management	Candidates can apply to jobs; employers can review, shortlist, and respond to applications
Dashboard	Separate dashboards for candidates, employers, and admins to manage tasks, applications, and postings
Frontend Routing	Pages: Home, Login, Dashboard, Job Listings, Application Status, Profile
Hosting	Fully deployed online for candidates and employers to access from anywhere

5. Tech Stack

Layer	Technologies
Frontend	React.js, React Router
Backend	Node.js, Express.js
Database	MongoDB (MongoDB Atlas)
Authentication	JSON Web Token (JWT)
Hosting	Vercel (Frontend), Render (Backend), MongoDB Atlas (Database)

6. API Overview

Endpoint	Method	Description	Access
/api/auth/signup	POST	Register a new user (Candidate/Employer/Admin)	Public
/api/auth/login	POST	Authenticate user and generate token	Public
/api/jobs	GET	Fetch all job/internship postings	Authenticated
/api/jobs/:id	POST	Create new job posting	Employer/Admin
/api/jobs/:id	PUT	Update job posting	Employer/Admin
/api/jobs/:id	DELETE	Delete job posting	Admin only
/api/applications	POST	Candidate applies to a job	Authenticated
/api/applications/:id	GET	Employer views applications	Employer/Admin