

## **Problem:**

### **1. For Students:**

- Students often miss out on internships, research opportunities, or academic competitions due to lack of visibility or accessibility.
- They struggle to know what professors are working on and how to get involved.

### **2. For Professors:**

- Professors face difficulty finding motivated students for research projects or assistants for academic tasks.
  - Managing student applications for opportunities is time-consuming.
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## **Solution:**

A professional platform that connects students with academic and professional opportunities, such as research assistant roles, internships, or academic competitions, while helping professors streamline the process of recruiting and mentoring students.

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## **Key Features:**

### **For Students:**

#### **1. Opportunity Board:**

- Browse and filter opportunities (e.g., research assistantships, internships, academic events) by field, skill level, or deadlines.
- Save opportunities for a personalized dashboard.

#### **2. Skill-Based Matching:**

- Get matched with opportunities based on your skills, interests, and academic background using a smart algorithm.

#### **3. Application Tracker:**

- Track the status of your applications (e.g., submitted, under review, accepted) in one place.

#### **4. Resource Center:**

- Access resources to help with applications, such as sample resumes, cover letters, and interview tips.
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### **For Professors:**

#### **1. Opportunity Posting:**

- Post opportunities (e.g., research positions, teaching assistant roles, lab work) and specify requirements.
- Receive applications directly through the platform.

2. **Applicant Management:**
    - View, sort, and filter student applications based on skills, GPA, or other criteria.
    - Approve or reject applications and communicate directly with students.
  3. **Team Management:**
    - Once positions are filled, manage your team of students with a built-in roster and messaging system.
  4. **Project Showcasing:**
    - Highlight your ongoing research projects and publications to attract interested students.
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## Advanced Features (Optional):

1. **Internship and Job Integration:**
    - Partner with companies to showcase exclusive internships or job openings for students.
  2. **Feedback System:**
    - Professors can provide feedback on students' applications or performance, helping them improve.
  3. **API Integration:**
    - Pull real-world job listings (e.g., from LinkedIn, Glassdoor) for additional internship opportunities.
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## Technical Scope:

### Frontend:

- **HTML, CSS, JavaScript:** Build a responsive and intuitive UI with clean dashboards for students and professors.

### Backend:

- **Database:**
  - Store opportunities, applications, and user profiles using **PostgreSQL** or **MySQL**.
  - Use **MongoDB** for optional scalability if needed for additional resource uploads.
- **APIs:**
  - REST APIs for opportunity posting, searching, and applying.
  - Optional integration with third-party APIs for pulling internship/job listings.

### Data Structures:

- **Hash Maps:** For quick lookups of opportunities and users.
- **Graphs:** To implement the skill-based matching algorithm.
- **Queues:** For handling and displaying application statuses in order.

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### **Why This Solves Real Problems:**

- Students gain visibility into academic and professional opportunities they would otherwise miss.
- Professors save time and effort in finding and managing motivated students for their projects.
- The platform bridges the gap between students and professors, fostering a more productive academic environment.