

INNOVATION LAB PROJECT

IITRESEARCHNET

CONNECTING FACULTY AND STUDENTS
FOR ACADEMIC RESEARCH



This is a collaborative platform designed to connect faculty and students across IITs for academic research.

PROBLEMS

- Research is essential in academic growth, but connecting the right students with faculty for research opportunities is often challenging. Students face limited access to faculty-led projects, and faculty lack an efficient way to find interested and skilled students
- Faculty and students often rely on email or informal channels to communicate and share job opportunities. Without a structured platform, job postings may get lost, students may miss opportunities, and communication between the two parties may be disjointed.

GOALS

- Provide a seamless communication platform where faculty and students can connect directly through chat features. This will help students inquire about research opportunities, and faculty can answer questions or share valuable insights regarding projects or roles.
- Organize job opportunities by college, ensuring that students can easily find roles relevant to their institution. This will make it easier for students to find localized opportunities and for faculty to target job postings to the appropriate students.
- By connecting students with research opportunities and jobs in their fields of interest, the platform aims to foster professional growth, career development, and practical experience. It also supports students in applying to roles that match their skill set

SYSTEM ARCHITECTURE

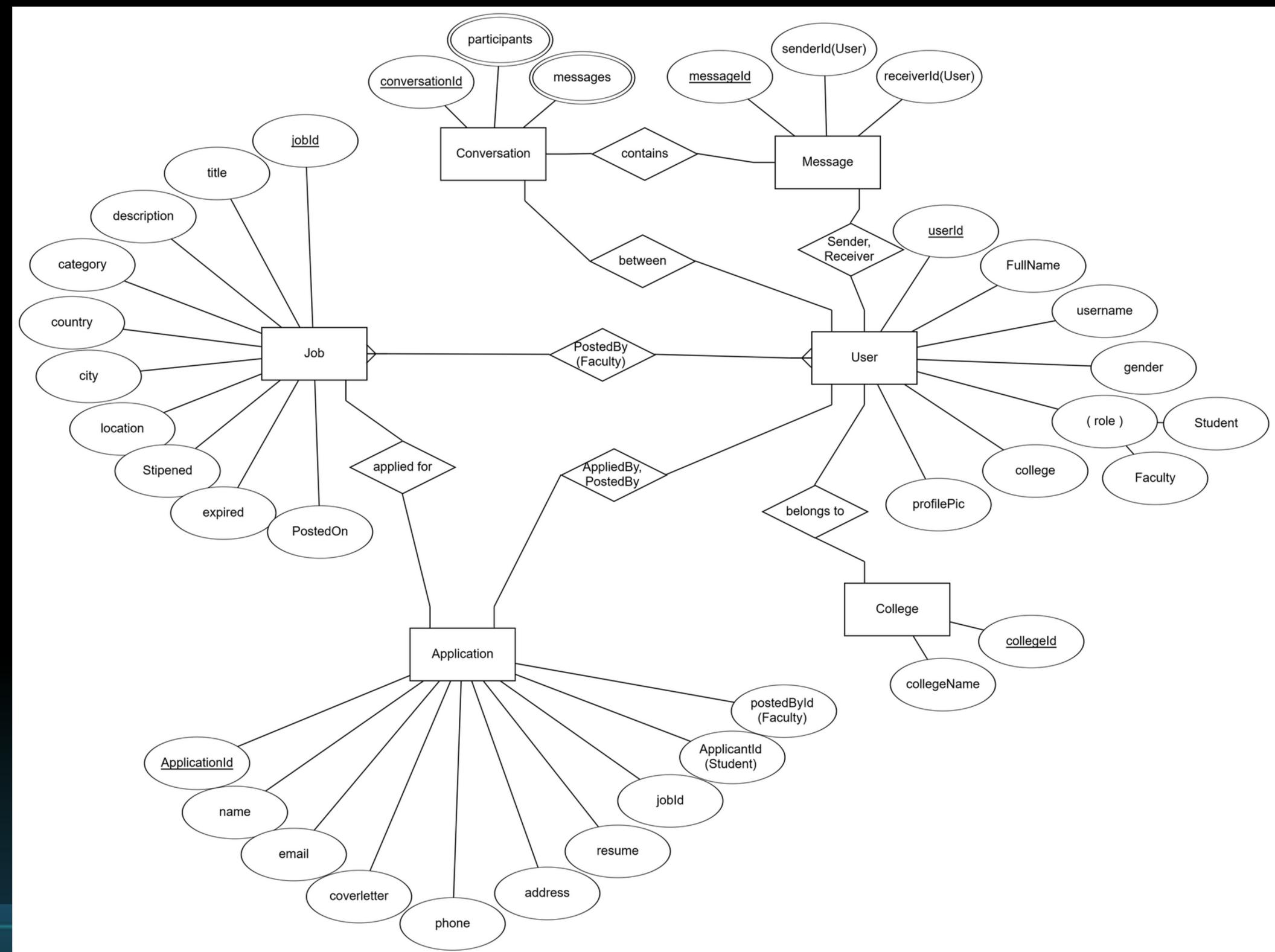
Full-stack MERN application

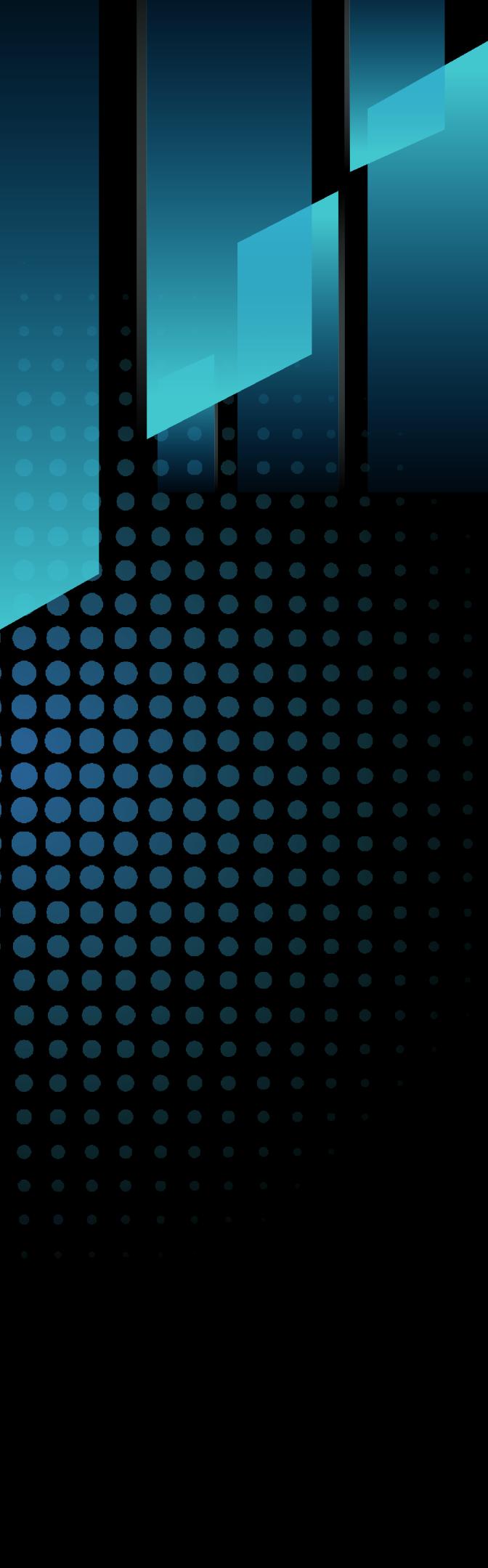
Frontend: React for a dynamic UI

Backend: Node.js with Express for APIs and real-time
functionality

MongoDB for data storage (Users, Jobs, Messages, etc.)

ER DIAGRAM

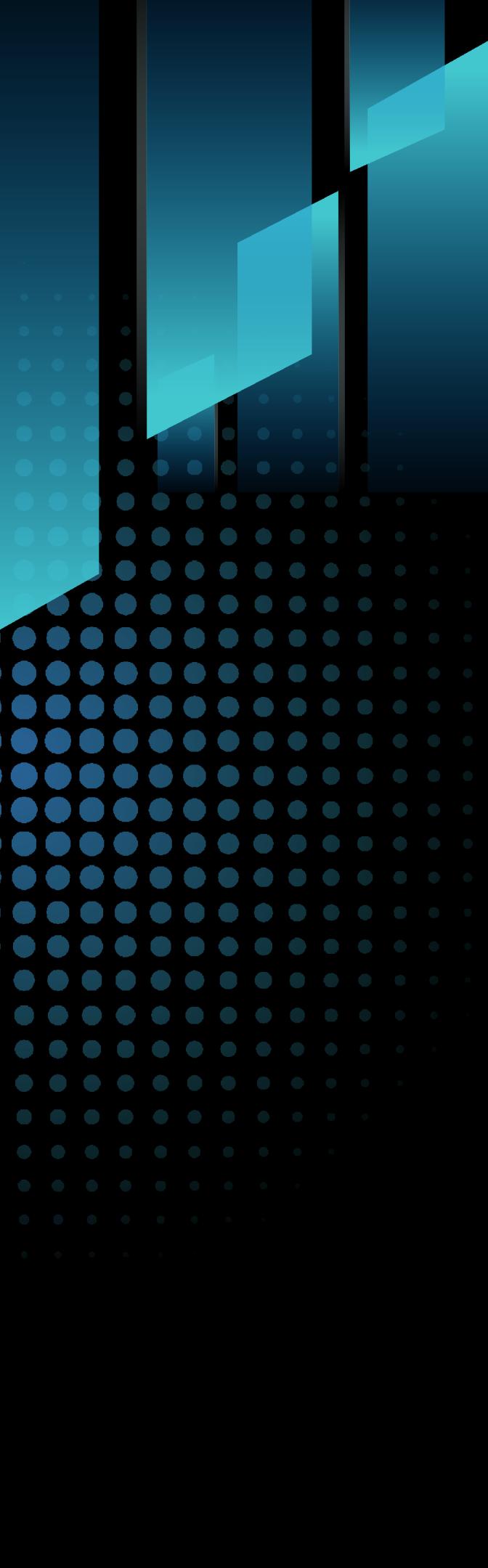




ROLE BASED FUNCTIONALITIES

FACULTY

- Post New Jobs: Easily share new research opportunities with students.
 - Update Existing Jobs: Modify job details to keep them current.
 - Delete Jobs: Remove outdated or filled positions.
 - Real-Time Chat: Engage in live communication with students about roles, expectations, and more.
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ROLE BASED FUNCTIONALITIES

STUDENT

- Explore Opportunities: Browse through various jobs posted by faculty.
 - Apply for Jobs: Submit applications for the positions that match your skills and interests.
 - Instant Communication: Chat directly with faculty members to inquire or discuss job details.
- 

HOME PAGE: FACULTY ENDPOINT

→ ⌂ ⓘ localhost:3000



[HOME](#) [ALL COLLEGES](#) [CHAT](#) [ALL OPPORTUNITIES](#) [APPLICANT'S APPLICATIONS](#) [POST OPENINGS](#) [VIEW YOUR OPENINGS](#)

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Discover, Collaborate, Innovate

Create Account

Join our platform to explore a world of research opportunities. By creating an account, you will gain access to valuable resources and connections that can help you advance your academic journey.



Explore or contribute to research opportunities.

Discover a wide range of research opportunities or share your own listings with our community. Whether you're seeking your next role or looking to connect with talent, our platform is here to support your career goals.

Apply for Research Opportunities / Recruit Talented Researchers

Discover a platform that connects ambitious researchers with relevant opportunities. Our mission is to facilitate collaboration by matching skilled individuals with the right research projects.

HOME PAGE: STUDENT ENDPOINT

localhost:3000

The screenshot shows a dark-themed web application interface. At the top, there's a navigation bar with icons for back, forward, search, and other browser functions. The URL 'localhost:3000' is visible. Below the navigation is the IITResearchNet logo with the tagline 'Discover, Collaborate, Innovate'. A horizontal menu bar includes links for 'HOME', 'ALL COLLEGES', 'CHAT', 'ALL OPPORTUNITIES', and 'MY APPLICATIONS'. The main content area features a large, bold title 'Discover, Collaborate, Innovate' with a small downward arrow. The page is divided into three main sections: 'Create Account' (with a user icon), 'Explore or contribute to research opportunities' (with a magnifying glass icon), and 'Apply for Research Opportunities / Recruit Talented Researchers' (with a green arrow icon). Each section contains descriptive text and a call-to-action button at the bottom.

IITResearchNet
Discover, Collaborate, Innovate

HOME ALL COLLEGES CHAT ALL OPPORTUNITIES MY APPLICATIONS

Discover, Collaborate, Innovate



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AUTHENTICATION PAGE

The image shows two side-by-side screenshots of a web application interface, likely from a development environment like ChatGPT, illustrating a login and sign-up process.

Left Side (Login Page):

- Title:** LoginIITResearchNet
- Fields:**
 - Username: Enter username
 - Password: Enter Password
 - Registered as: Select Role
- Links:** Don't have an account?
- Buttons:** Login

Right Side (Sign Up Page):

- Title:** Sign Up IITResearchNet
- Fields:**
 - Full Name: Enter your name
 - Username: Enter username
 - Password: Enter Password
 - Confirm Password: Confirm Password
 - College: College
 - Registered as: Select Role
 - Gender: Male Female
- Links:** Already have an account?
- Buttons:** Sign Up

Browser Header: Vite + React

Taskbar: Shows various pinned icons including Microsoft Edge, File Explorer, Task View, and others.

ALL OPPORTUNITIES PAGE

localhost:3000/job/getall



HOME ALL COLLEGES CHAT ALL OPPORTUNITIES APPLICANT'S APPLICATIONS POST OPENINGS VIEW YOUR OPENINGS



Machine Learning Research Project

Undergraduate Research Programs

Posted By: ArunaGupta

IIT Patna

[Job Details](#)

AI-Driven Optimization for Sustainable Energy Systems

Industry-Sponsored Research Programs

Posted By: Dr. Subrat Kar

IIT Dehli

[Job Details](#)

MERN research

Fellowship Research Programs

Posted By:

[Job Details](#)

LMN stack developer

jr. engineer

Posted By:

[Job Details](#)

EFGH

Graduate Research Programst

Posted By: Preetam Kumar

IIT Bombay

[Job Details](#)

ALL OPPORTUNITIES COLLEGE WISE

localhost:3000/colleges



HOME ALL COLLEGES CHAT ALL OPPORTUNITIES MY APPLICATIONS



All Current Research Opportunities

IIT Patna

Research opportunities at IIT Patna

IIT Bombay

Research opportunities at IIT Bombay

IIT Dehli

Research opportunities at IIT Dehli

IIT Kharagpur

Research opportunities at IIT Kharagpur

IIT Roorkee

Research opportunities at IIT Roorkee

IIT Tirupati

Research opportunities at IIT Tirupati

DISCUSSION PAGE

localhost:3000/chat

HOME ALL COLLEGES CHAT ALL OPPORTUNITIES MY APPLICATIONS

To: Preetam Kumar

divyanshu123

ArunaGupta

Preetam Kumar

Dr. Subrat Kar

Harshit Gupta

Search... 

Hi Arya , I had found through your resume that you had developed great projects and if you would like to work on our project than tell me.

19:05

Thank you, Sir! I'm very interested in working on the project and eager to learn more details.

19:07

 Send a message 

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JOB DETAILS PAGE

localhost:3000/job/670f51d6fb8c401e57dfc506



HOME ALL COLLEGES CHAT ALL OPPORTUNITIES MY APPLICATIONS



Job Details

Title: AI-Driven Optimization for Sustainable Energy Systems

Category: Industry-Sponsored Research Programs

Country: India

City: Dehli

Location: Dehli

Description: This research focuses on using artificial intelligence (AI) and machine learning techniques to optimize the operation and management of renewable energy systems, such as solar and wind power.

Job Posted On: 2024-10-16T05:40:38.767Z

Salary: 10000 - 15000

Apply Now





[Post a New Job](#)

Job Title	
Select Category	▼
Country	City
Location	
Select Stipend Type	▼
Please provide Stipend Type *	
Job Description	

[Create Job](#)