UPRM Research Portal (RP)

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1 Problem Statement

Students, despite the common desire to engage in research to hone their skills and gain practical experience, encounter difficulties in navigating the vast volume of daily emails. This makes it arduous for them to identify and track pertinent opportunities.

2 Problem Background

The lack of a comprehensive and up-to-date platform for research project complicates the search. Many department-specific sites either do not exist or are outdated such as the “feria de investigaciones” website.

this challenge is extended to professors seeking interdisciplinary collaboration due to the emails being lost in outlook due to the sheer amount of emails sent per day.

The team conducted a survey in which we asked students if they find it easy to find research projects In which most of the students answered that it is extremely difficult due to the lack of a potential platform, which leads to missed opportunities.

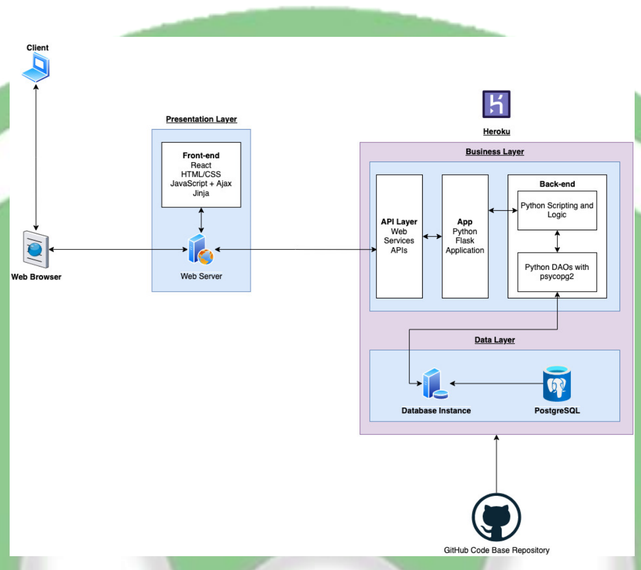
3 Objectives

Create and implement a comprehensive web platform for research projects on campus that streamlines the process of accessing research opportunities at UPRM.

- Achieve a website deployment rate success of 100%
- Attain user authentication success rate of 95%.
- Implement a personalized recommendation engine with a precision rate of 80%.

4 Technical Approach

RP UPRM will be hosted and deployed by the Heroku service, which will also provide the needed database. The web app will follow a standard layered model, which will support client-sever operations through the use of RESTful APIs.



Visualization of the RP-UPRM architecture at a surface level.

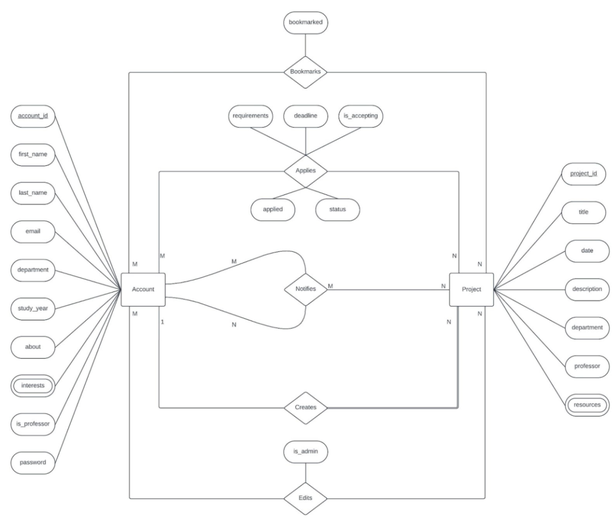
Technologies used for the project:

- For front-end the team utilizes HTML/CSS, JavaScript and Jinja
- For back-end the team utilizes Python and java script
- For its database, the team utilizes PostgreSQL, provided by Heroku.

Modules:

- The framework is Python Flask, which will run the app on host an deploy it.
- Psycopg2: for database interaction

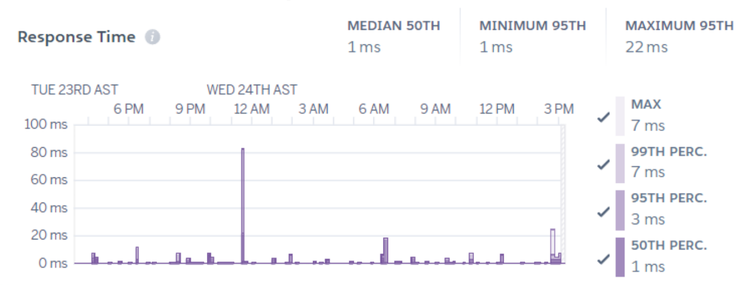
Our relational database schema is composed of two major entities: Account and Project. These will represent students and professors, and the research projects respectively.

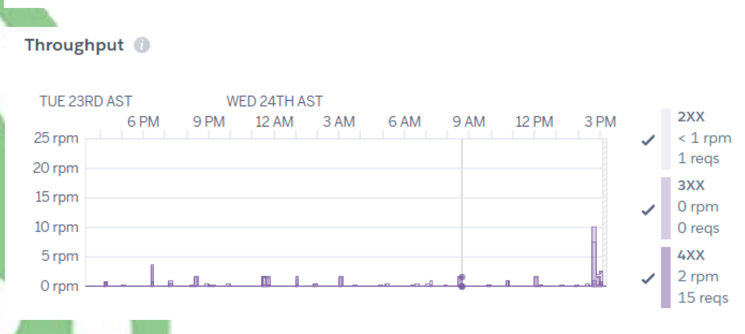


Entity-relation Diagram for RP-UPRM

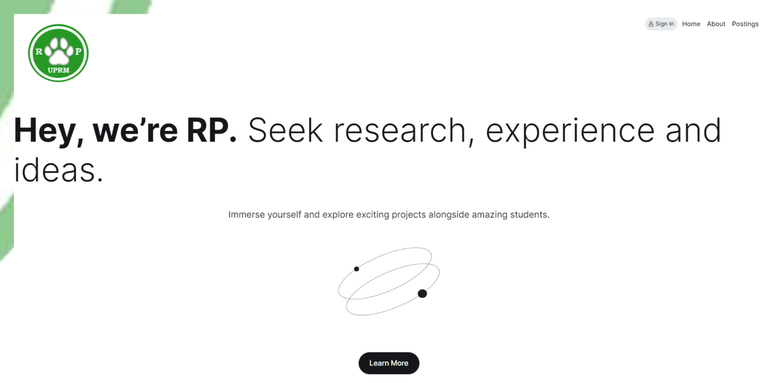
5 Results

In the performance test, the web application demonstrates a robust stability and efficiency. Every endpoint on the website(home, posting, about us), experienced an average quick response time. The request rate remained consistent across all endpoints.





“Experience RP-UPRM, Where we are invested in your success”



6 Conclusion

RP-UPRM offers a centralized platform for students and professors alike. Through streamed lined access to opportunities, our solution empowers academic growth. RP-UPRM paves the way for vibrant research at UPRM.

R References

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