**Research productivity tool, to store findings, paper drafts, code, etc**

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**ABSTRACT :**

In this paper a web based application is discussed where students doing research can manage their research project/work. One person can work on many projects. Multiple students also can contribute to same project. Progress of each project will be managed and monitored on website.

**KEYWORDS:**

Django, Django-rest-framework, ReactJS, HTML, CSS, MySQL

**INTRODUCTION:**

The web-app is mainly focused on increasing productivity and management of Students doing research. Students can create their accounts using emails or they can sign-up or login using google account. If project involves code, the code will be hosted to github and

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data about project will be stored in database of website.

Student’s profile will list and store all projects done by him/her. Progress for each project will also be stored. Student profile and project profile will have many-to-many relationship.

**DJANGO:**

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. It requires almost no configuration. Developer can develop web applications right away. It allows developers to use modules for faster development. Django will be a very good choice for designing and developing backend of web-app.

**DJANGO-REST-FRAMEWORK:**

Django REST framework is a powerful and flexible toolkit for building Web APIs. DRF creates web browsable API which is very useful for developers. It serializes django models. It support advanced authentication methods. It provides its own Class-Based-Views but also give option for function based views for customization.

**MYSQL:**

It is an Open-source Relational Database Management System. It is currently owned by Oracle Corp. MySQL is written in C and C++. It is going to be a good choice for our project.

**HTML/CSS:**

They are integral parts of any website or web-app. HTML provides basic skeleton to a web page. CSS is used to apply design to that skeleton. They are not used without each other. There are many CSS frameworks available but bootstrap is most popular of them all.

**REACT-JS:**

React is a free and open-source front-end JavaScript library for building user interfaces or UI components. It is originally developed and maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page applications. It is easy to learn and implement. It has very good cross-platform support. It has faster response time than other front-end technologies. Using react for front-end design will be good option.

**MODULES:**

1. Admin login
2. Student/user login
3. Student profile/details
4. Project details
5. Paper/Paper drafts
6. Project progress

**ADVANTAGES OVER OTHER WEB-APPS:**

People might speculate that normal notes application and other applications like this will do the job but they will just increase the load of students because they can’t store all information on one place, also information has to be stored in a structured way plus nice user interface is also required.

All these functionalities are provided by this web-app. It will manage all data about the students and all data about the projects they are working on. Managing research data can be cumbersome task but all data is manage in structured way new connections can be formed and more information can be created/collected from already existing data. This can increase productivity of students to a whole new level.

It will be free of cost.

**WORKING OF THE RESEARCH PRODUCTIVITY TOOL:**

Working model of the web-app have not been created but overall working will be explained here. User will have one web-browser and an internet connection. First user will be given a choice to create an account or just login using google OAuth. Once user creates an account he/she will have to complete the whole profile. Then user can add projects and data about the projects. User also can set progress of the project or research. User can store research paper or drafts for the paper. If project involves written code then github url for code of project can also be added to project info.

One user can work on multiple projects and one project can be done by many people.

If user forgets his/her password then reset password functionality will send reset password link to user’s registered mail.

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