

Private Dataset Access Workflow (python)

Key Requirements of Project:

- User registration and login should be implemented.
- Private datasets should be accessible by requesting to the owner and after accepting User agreement.
- Public datasets should be accessible.
- Dataset owners should be able to accept/reject requests.
- Users should be able to upload new datasets.

Requirements Specification:

Requirements:

Functional:

- Different Users should be able to register and login into the system.
- Platform should support private and public datasets.
- Dataset Viewers should be able to access public dataset directly and they should be able to request access to private dataset.
- Dataset owners should be able to grant and revoke access of their dataset to the viewers.

Non-functional:

- Platform should be secure, without access viewers should not be able to access private datasets.
- Platform should be available to different users at the same time.
- Platform should be scalable as the number of users and datasets increases.
- Platform should be interoperable with other projects having common attributes.

Additional Functionalities:

- Users can be Owner and Viewer both at same time. For example, if there are 3 datasets named A(private),B(private) and C(public). Then user-1 can be the owner for dataset A, he can access dataset C(public). He also can access B after his request is accepted by the dataset owner of B.
- Access requests for private dataset must be sent after the user accepts User Agreement.

- Dataset owners can give access to particular users (i.e. of some organizations) at the time of uploading any private dataset.
- Private dataset owner will be able to see requester's profile (basic info like name, organization, etc)

Technology Stack:

- Backend - Django
- Frontend - React

Relevant Projects:

-> Publishing datasets and versions (Python)

- After the dataset is published by this project, it should be updated in our project's dataset list.

-> Standard analytics on datasets (Python) & Studies on datasets (like notebooks) (Python)

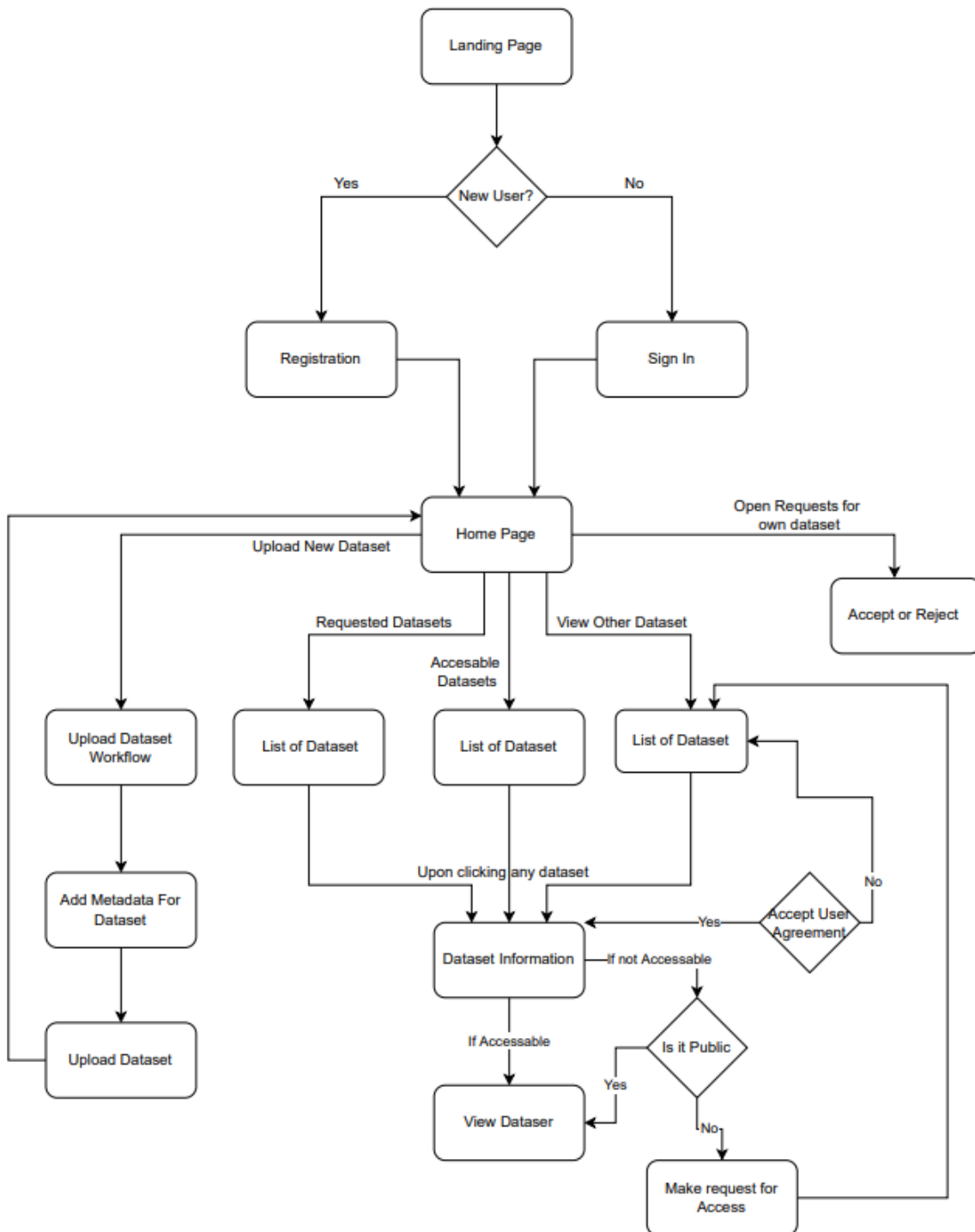
- If dataset is public or user's access request is approved then only he/she should be able to perform Analytics or Study on any dataset.

-> User authentication service

- This project will be used to register/login different dataset users and dataset owners of our project.

Design Specification:

WorkFlow Diagram:



Homepage Design:

This page will be common for all users.

The mockup is enclosed in a large black rectangular border. It features three stacked sections, each with a title and a rounded rectangular container. The first section is titled 'Own Datasets' and contains a rounded rectangle with 'Dataset List' and four horizontal lines. The second section is titled 'Accessible Datasets' and contains a similar rounded rectangle. The third section is titled 'Pending Dataset Requests' and also contains a rounded rectangle with 'Dataset List' and four horizontal lines. At the bottom of the main container, there are two separate rectangular buttons: 'View all datasets' on the left and 'Upload dataset' on the right.

Own Datasets

Dataset List

Accessible Datasets

Dataset List

Pending Dataset Requests

Dataset List

View all datasets

Upload dataset

- After choosing 1 dataset from “own datasets”, owners will be able to see user requests for that particular dataset and accept/reject in the new page.
- For private datasets if their owner had accepted the current user’s request then that will be listed under “Accessible datasets”, if not accepted/rejected then will be available inside “Pending Dataset Requests”. Users can see other datasets by clicking on the “View all datasets” button.
- Users can upload datasets by clicking on the “Upload dataset” button, and will be able to give optional access to specific groups of users.