**Keystroke Biometric Project Guide**

**Notebook File:**

The notebook file is where the actual training of the models happens. We train plenty of models here to choose the one with the best accuracy. The column username cannot be passed directly to the models, so we created an encoder that encodes those names like 0, 1, 2, and so on. This encoder will also be exported and used in the backend API to encode the user names.

**Keystroke Biometric Web App:**

1. **Backend (Flask API)**

The backend of the app handles all the aspects related to machine learning. As the front end communicates with the backend via REST API that is why you will have to run the backend first. The model files are saved in the models directory of the API which can be replaced with the freshly trained models with new data. The new data is saved in the data directory of the API, you can just take that data CSV file and train new models with that data using your notebook file. Then those newly exported models can be replaced with the old ones in the models folder.

**Steps to run the backend:**

* 1. Make sure you have Python installed
  2. Install libraries: pip install -r requirements.txt
  3. Run API: python -m flask --app api run

1. **Frontend (HTML, CSS, JavaScript)**

The frontend part deals with the face of the app that the user will see in the browser. It also has the JavaScript implementation to capture the keystroke features. There is a specific phrase or password which is “roberto”, which the users have to type for us to capture the keystroke features for either the login or signup.

**Steps to run the front end:**

1. Just open the **index.html** file in your browser directly.