

Architecture

Thyroid Disease Detection System

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| Written By | Manish Kumawat |
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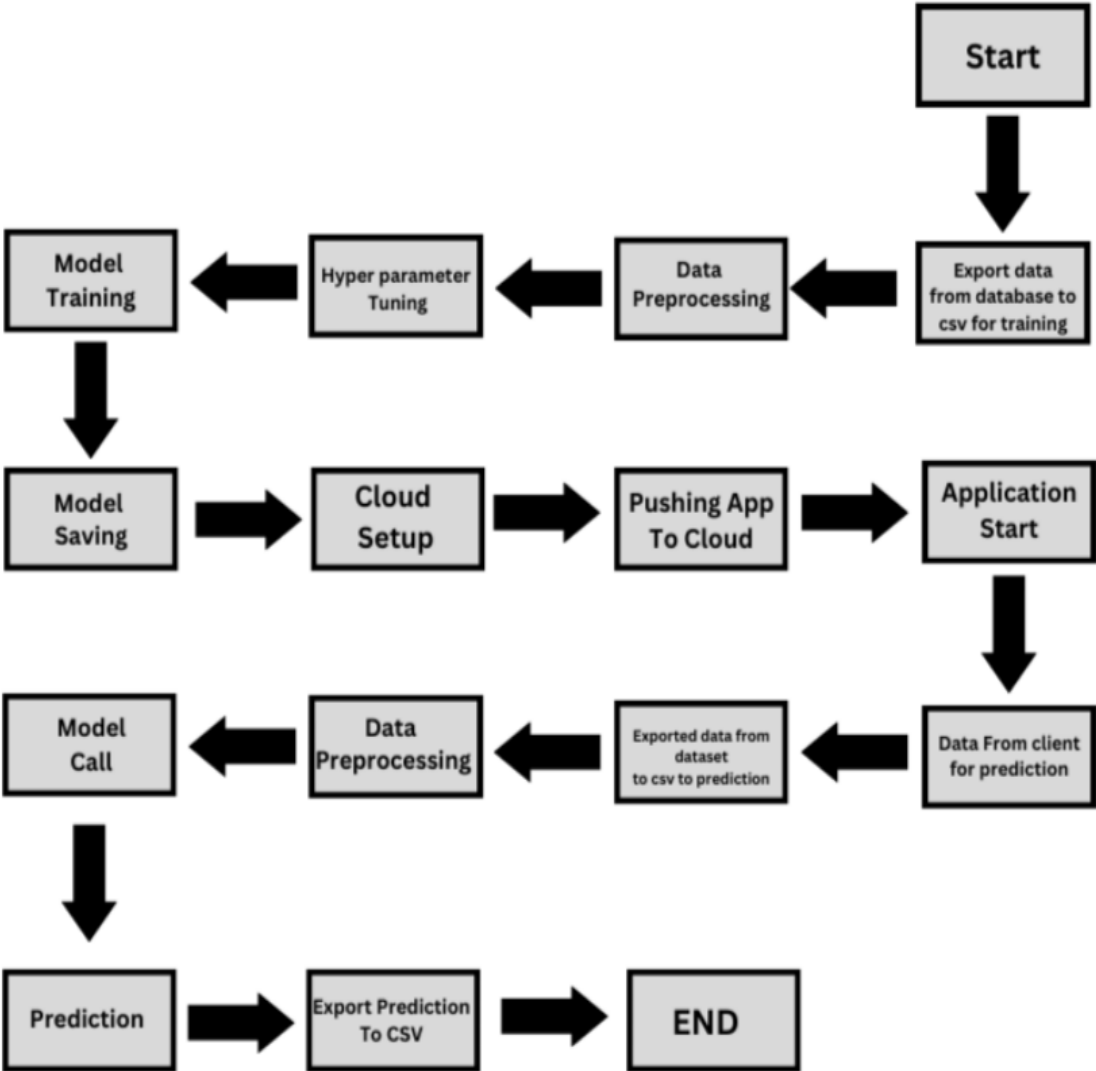
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2. Architecture



3. Architecture Description

3.1 Data Description

We will be using Thyroid Disease Data Set present in UCI Machine Learning Repository. This Data set is satisfying our data requirement. Total 3163 Rows present in each column, and total 26 columns are there

3.2 Export Data from database to CSV for Training

Here we will be exporting all batches of data from database into one csv file for training.

3.3 Data Preprocessing

We will be exploring our data set here and do EDA if required and perform data preprocessing depending on the data set. We first explore our data set in Jupyter Notebook and decide what pre-processing and Validation we have to do such as imputation of null values, dropping some column, etc and then we have to write separate modules according to our analysis, so that we can implement that for training as well as prediction data.

3.4 Hyperparameter Tuning

we will train the model on different different machines learning algorithms, and do hyperparameter tuning for obtaining the best accuracy.

3.5 Model Training

Here we will find the best accuracy model and then train the dataset on it and in next step we save the model in model.pkl

3.7 Model Saving

After performing training, we will save our models so that we can use them for prediction purpose.

3.8 Cloud Setup

Here We will do cloud setup for model deployment. Here we also create our flask app and user interface and integrate our model with flask app and UI

3.9 Push app to cloud

After doing cloud setup and checking app locally, we will push our app to cloud to start the application.

3.10 Data from client side for prediction purpose

Now our application on cloud is ready for doing prediction. The prediction data which we receive from client side will be exported from DB and further will do same data cleansing process as we have done for training data using modules we will write for training data.

3.11 Export Prediction to CSV

Finally when we get all the prediction for client data, then our final task is to export prediction to csv file and hand over it to client.