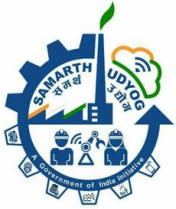


Project Phase Report - 4

INTP22-ML-5: Power Line Fault
Detection

Sshubam Verma

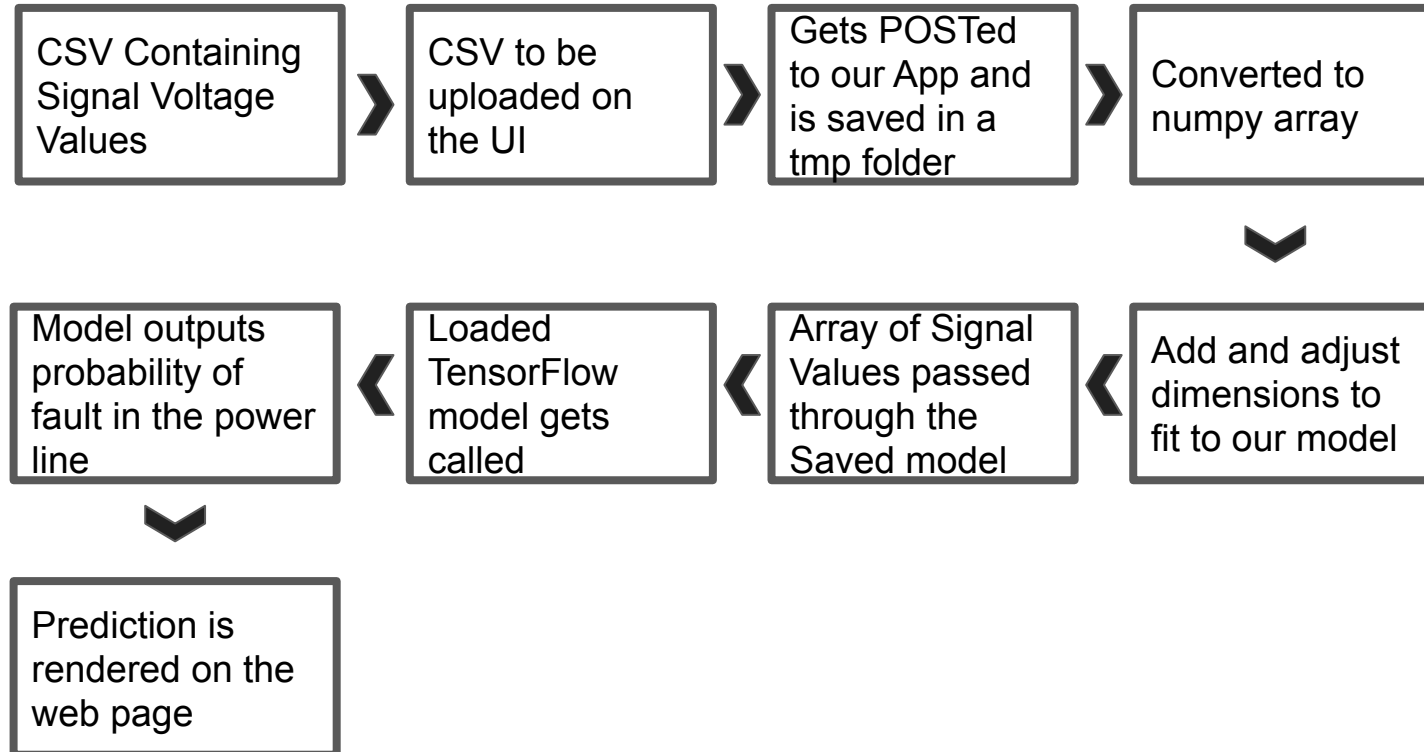


PROJECT OBJECTIVES FOR THE PHASE:

- Deploy the model in a Basic Flask App to accept a csv of Signal values and process it to the model for making a prediction
- Work on making a good User Interface for the App
- Host the Flask app on Heroku
- Solve related code issues

PHASE - 4 PROGRESS

APP PROCESS FLOW DIAGRAM



PHASE - 4 PROGRESS

```

EXPLORER
  app
    requirements.txt
    gitignore
    runtime.txt
    main.py
    index.html
    wsgi.py
  FINAL_FSM_PROJECT
    __pycache__
    app
    static/images
    cloudlogo.png
    plant1.png
    templates
    lstm_model_weights.best.hdf5
    main.py
    gitignore
    Procfile
    requirements.txt
    runtime.txt
    wsgi.py

main.py
14 model.add(tf.keras.layers.Conv1D(32, 8, padding='same', input_shape=(2000, 1), activation='relu'))
15 model.add(tf.keras.layers.MaxPooling1D(2, padding='same'))
16 model.add(tf.keras.layers.Conv1D(64, 8, padding='same', activation='relu'))
17 model.add(tf.keras.layers.MaxPooling1D(2, padding='same'))
18 model.add(tf.keras.layers.Conv1D(128, 8, padding='same', activation='relu'))
19 model.add(tf.keras.layers.MaxPooling1D(2, padding='same'))
20 model.add(tf.keras.layers.Conv1D(256, 8, padding='same', activation='relu'))
21 model.add(tf.keras.layers.LSTM(64, dropout = 0.2, recurrent_dropout = 0.5))
22 model.add(tf.keras.layers.Dense(1, activation='sigmoid'))
23
24 model.load_weights('app/lstm_model_weights.best.hdf5')
25 @app.route('/predict', methods=['POST'])
26 def predict():
27     csv = request.files['csv']
28     csv_path = "/tmp/" + csv.filename
29     csv.save(csv_path)
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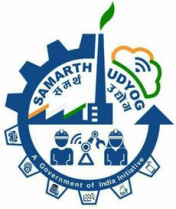
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

remote: ----- Installing SQLite3
remote: ----- Installing requirements with pip
remote: ----- Discovering process types
remote: Procfile declares types => web
remote:
remote: ----- Compressing...
remote: Done: 172.8M
remote: ----- Launching...
remote: Released v70
remote: https://powerline-fault-detection.herokuapp.com/ deployed to Heroku
remote:
remote: This app is using the Heroku-20 stack, however a newer stack is available.
remote: To upgrade to Heroku-22, see:
remote: https://devcenter.heroku.com/articles/upgrading-to-the-latest-stack
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/powerline-fault-detection.git
69773de..882ab4c master -> master
(tensorflow) sshubam@Sshubams-MacBook-Pro FINAL_FSM_PROJECT %
* History restored

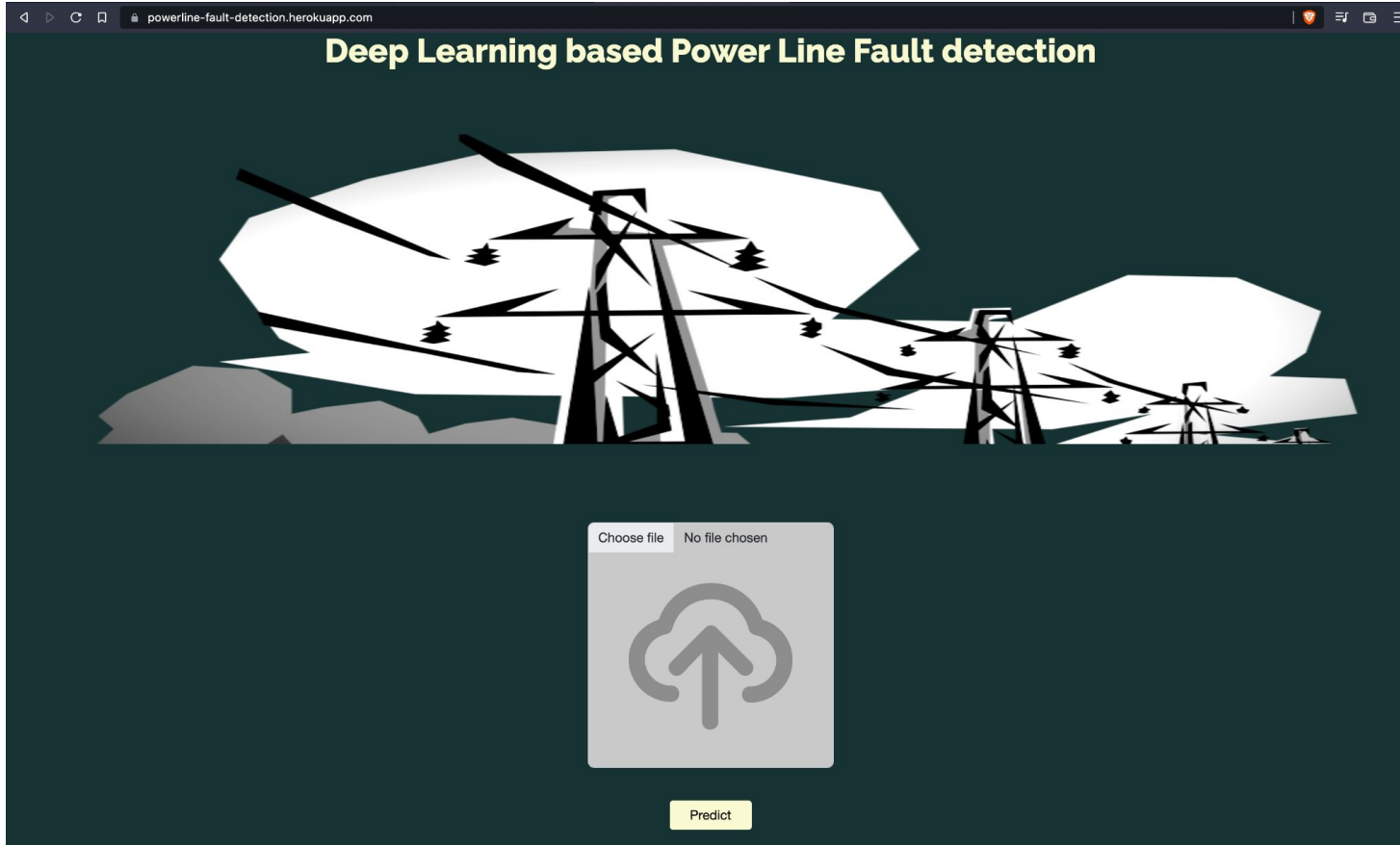
(base) sshubam@Sshubams-MacBook-Pro FINAL_FSM_PROJECT %

```

Successfully deployed, hosted and tested my web app for predicting Fault in Power Lines using Deep Learning, completing the end-to-end process. After solving all the dependency and internal app issues, version 70 is now live on Heroku.



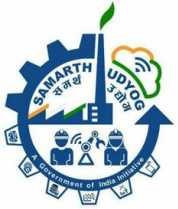
PHASE - 4 PROGRESS



[Visit App](#)



[Code](#)



Gantt Chart

[Gantt Chart LINK](#)

PROJECT TRACKING

PROJECT TITLE		Power Line Fault Detection					COMPANY NAME		IAFSM
PROJECT COORDINATOR		DEVESH TARASIA					DATE		01/06/2022
PROJECT DETAILS								DELIVERABLES	
STATUS	PRIORITY	START DATE	END DATE	DURATION	TASK NAME	ASSIGNEE	DESCRIPTION	DELIVERABLE	% DONE

Project Initiation, briefing and planning

100%

In Progress	▼ Medium	▼ 01/06/2022	06/06/2022	5	Analysis	Sshubam Verma	Problem statement analysis		100%
In Progress	▼ High	▼ 07/06/2022	10/06/2022	3	Research	Sshubam Verma	Read and analyse related research papers		100%
In Progress	▼ High	▼ 11/06/2022	15/06/2022	4	Data Cleaning	Sshubam Verma	Understanding data and Exploratory Data Analysis		100%
In Progress	▼ High	▼ 15/06/2022	24/06/2022	9	Modelling	Sshubam Verma	Model Building and Training		100%
Not Yet Started	▼ Medium	▼ 25/06/2022	28/06/2022	3	Tuning	Sshubam Verma	Model Hyperparameter tuning		100%
Not Yet Started	▼ High	▼ 29/06/2022	10/07/2022	11	Testing	Sshubam Verma	Model comparison and testing		100%
Not Yet Started	▼ High	▼ 11/07/2022	25/07/2022	14	Deployment	Sshubam Verma	Model Deployment		100%

Project Submission and Presentation

100%

In Progress	▼ High	▼ 05/06/2022	10/06/2022	5	Task	Sshubam Verma	Phase Report - 1		100%
In Progress	▼ High	▼ 20/06/2022	30/06/2022	10	Task	Sshubam Verma	Phase Report - 2		100%
Not Yet Started	▼ High	▼ 05/07/2022	10/07/2022	5	Task	Sshubam Verma	Phase Report - 3		100%
Not Yet Started	▼ High	▼ 15/07/2022	25/07/2022	10	Task	Sshubam Verma	Phase Report - 4		100%