**Model Deployment and API Testing using Heroku and Postman**

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**The Dataset:**

I used a dataset from kaggle.com, with the URL: [Dataset](https://www.kaggle.com/datasets/anubhabswain/brain-weight-in-humans)

It gives us information regarding a person’s brain weight given other features like gender, age

and head size (in cm3).

**The Model:**

Since this deliverable focussed more on the deployment of the model rather than the performance of the model, I have used a simple Linear Regression Model to predict the weight of the brain

given user-entered attributes.

Below is the code to train and serialize the model into a pickle file. Pickle was used as it is

quite simple to use and understand.

**Model Deployment:**

Once we have our model stored in the pickle file, we can now go on and deploy the model using

Flask. In this step, we de-serialize the model back into a python object to send some unseen data into our model through our webpage and predict an output.

The python script for the deployment of our model is shown below.

Here, since our training data has classified ‘Male’ as 1 and ‘Female’ as 2, it isn’t intuitive that

the user must enter these values. Instead, the webpage takes in the data as Male/Female and

the script transforms it into the required form that our model needs to give an output.

Similarly, for age, all ages > 18 are categorized as 1 while ages <= 18 are categorized as 2.

A similar step was done to prepare the user-inputted data for our model.

**HTML Webpage:**

Now that our Flask app is ready, we needed an interface to interact with the user and get the

data needed to perform predictions. For this, an HTML was used. Below is the HTML code written to generate the page.

**Landing Page Source Code:**

**Result Page Source Code:**