Deploying HVP Model:

Please follow the instructions below to deploy the **HVP Personality Trait Prediction** model using AWS Lambda.

Step 1: Set Up the S3 Bucket

1. Create an S3 bucket to store the model and dataset files (e.g., my-model-bucket).
2. Upload the following files to your S3 bucket:
    - **Model file**: my_pipeline.pkl
    - **Dataset file**: combined_hvp_numeric.xlsx

Step 2: Create the Lambda Function

1. Go to the AWS Lambda Console.
2. Create a new Lambda function with the following settings:
    - **Function name**: hvp-personality-prediction
    - **Runtime**: Python 3.8
    - **Execution role**: Choose **Create a new role with basic Lambda permissions**.

Step 3: Add IAM Permissions

Attach the following policy to the Lambda execution role to allow access to S3:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": ["s3:GetObject"],
      "Resource": "arn:aws:s3:::your-bucket-name/*"
    }
  ]}
```

Step 4: Add Environment Variables

1. In the Lambda function configuration, go to **Environment variables** and add the following variables:
    - MODEL_BUCKET_NAME: your-bucket-name
    - MODEL_FILE_KEY: path/to/my_pipeline.pkl
    - DATASET_FILE_KEY: path/to/combined_hvp_numeric.xlsx

Step 5: Upload the Lambda Function Code

1. Copy and paste the **lambda_function.py** code into the Lambda function editor.
2. Upload any required dependencies (e.g., joblib, scikit-learn, etc.) if necessary.

Step 6: Test the Lambda Function

1. Create a **Test Event** in the Lambda console with the following JSON:

```
{
    "text": "I am very outgoing and love socializing with people."
}
```

2. Click **Test** to verify the function works correctly.

Step 7: (Optional) Set Up API Gateway

1. If you need to expose this Lambda function as a web API, follow these instructions to set up **API Gateway**:
    - Create a new REST API and link it to your Lambda function.