

Live Coding Challenge: Personality Classifier Django App

Time Limit: 40 minutes

Database: SQLite

UI: Any (Django templates, CBV/FBV, REST API, React, terminal, etc.)

External Help: Use of ChatGPT, google, etc is allowed

Objective

Build a Django application that:

1. Loads and stores the provided dataset.
2. Trains a model to classify personality type as "Introvert" or "Extrovert".
3. Provides an interface for inputting new data and returning the predicted class.

Dataset

You will be given a CSV file named `personality_data.csv`.

Requirements

1. **Django Model**
 - Store the dataset in a model.
2. **Training**
 - Read data from CSV or DB.
 - Encode categorical variables (e.g., Yes/No to 1/0).
 - Train a classifier.
 - Persist the model using `joblib` or `pickle` etc...
3. **Interface for Prediction**
 - Accept input for each feature from the user.
 - Run prediction using the trained model.
 - Return "Introvert" or "Extrovert".
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4. UI Options

- Any method acceptable: form view, API endpoint, React UI, CLI, etc.

Evaluation Criteria

- Functionality of the Django app.
- Clear project structure and code organization.
- Ability to train and infer from the model.
- Working and user-friendly interface.
- Reasonable preprocessing and model choice.

Deliverables

- Django project directory
- Model training logic
- Saved model file
- Interface for inference