Manual: How to Adjust Parameters

This guide explains how to configure and run eval2.py to evaluate model fairness for a selected feature in a dataset.

1. Adjusting Key Parameters

```
model_path = 'DNN/model_processed_adult.h5'
dataset_path = 'dataset/processed_adult.csv'
class_label_column = 'Class-label'
budget = 100
samples_generate = 10
feature_generate = 10
```

Modify the following parameters inside eval2.py:

- **Model Selection:**
  Change model_path to select a different pre-trained model.

- **Dataset Selection:**
  Update dataset_path to test a different dataset.

- **Target Label:**
  Modify class_label_column if your dataset has a different column for classification.

- **Number of Data Pairs (budget)**
  Defines how many sample pairs (A, B) are generated and tested. Increasing it improves result reliability but increases computation time.

- **Number of Generated Samples (samples_generate)**
  Controls how many samples are randomly generated for selection. A higher value ensures better sample selection but increases runtime.

- **Feature Value Variation (feature_generate)**
  Determines how many different values of a sensitive feature (e.g., gender) are generated. A higher value ensures better feature selection but increases runtime.

2. Running the Script

Execute eval2.py in the terminal, specifying the feature to test.

Example for evaluating **gender fairness**:

python eval2.py gender

Example for evaluating **race fairness**:

python eval2.py race

To test multiple features at once (e.g., gender and race):

python eval2.py gender race