Database Data Retrieval Module

- To modify your crime.py code to retrieve data from the MySQL database you've created, you'll need to use Python's MySQL database connector to execute SQL queries and fetch the data. Here's how you can modify your code to retrieve data from the database:

- First, you'll need to import the MySQL database connector in your Python code:

```
import mysql.connector
```

- Establish a connection to the MySQL database using the credentials for your database:

```
db_connection = mysql.connector.connect(
    host='your_host',
    user='your_user',
    password='your_password',
    database='crime_prediction'
)
```

- ❖ Replace 'your_host', 'your_user', and 'your_password' with the appropriate database credentials.

- ❖ Create a cursor object to interact with the database:

```
db_cursor = db_connection.cursor()
```

- ❖ Modify the code where you retrieve data to use SQL queries instead of reading from the CSV file. For example, instead of:

```
df = pd.read_csv('crime.csv')
```

- ❖ You'll use SQL queries to fetch the data:

```
query = "SELECT Name, Age, DrugTest, Obedient,
EmotionScore, ConfidenceScore, ConsistencyScore,
InnocenceScore, Gender, Criminal FROM training_data"
db_cursor.execute(query)
data = db_cursor.fetchall()
```

- ❖ Create a Pandas DataFrame from the retrieved data:

```
df = pd.DataFrame(data, columns=['Name', 'Age', 'DrugTest',
'Obedient', 'EmotionScore', 'ConfidenceScore',
'ConsistencyScore', 'InnocenceScore', 'Gender', 'Criminal'])
```

- ❖ Continue with the rest of your code as you did before, using the df DataFrame to perform the required operations.

- ❖ Finally, don't forget to close the cursor and the database connection when you're done:

```
db_cursor.close()
db_connection.close()
```

Full Modified Code Snippet

```
import mysql.connector
import pandas as pd

# Establish a connection to the MySQL database
db_connection = mysql.connector.connect(
    host='your_host',
    user='your_user',
```

```
    password='your_password',
    database='crime_prediction'
)

# Create a cursor
db_cursor = db_connection.cursor()

# Retrieve data from the database
query = "SELECT Name, Age, DrugTest, Obedient,
EmotionScore, ConfidenceScore, ConsistencyScore,
InnocenceScore, Gender, Criminal FROM training_data"
db_cursor.execute(query)
data = db_cursor.fetchall()

# Create a DataFrame from the retrieved data
df = pd.DataFrame(data, columns=['Name', 'Age', 'DrugTest',
'Obedient', 'EmotionScore', 'ConfidenceScore',
'ConsistencyScore', 'InnocenceScore', 'Gender', 'Criminal'])

# Close cursor and connection
db_cursor.close()
db_connection.close()
# Continue with the rest of your code
```

- Make sure to replace 'your_host', 'your_user', and 'your_password' with the actual database credentials. This

modification allows you to retrieve data from the MySQL database you've created instead of the CSV file.