

Prediction In Action Module

1. To create the predictionInAction.py module that coordinates all the components and provides the functionalities you described, you can organize it as follows:

```
import dataRetrieval
```

```
import training
```

```
import deployment
```

```
import sentimentAnalysis
```

```
import database
```

```
def main():
```

```
    # Prompt the suspect to enter information
```

```
    name = input("Enter your name: ")
```

```
    age = int(input("Enter your age: "))
```

```
    gender = input("Enter your gender: ")
```

```
    # Pass suspect information to sentiment analysis module
```

```
    obedience, confidence, emotion_score, consistency_score =  
    sentimentAnalysis.analyze_suspect(name, age, gender)
```

```
# Prepare data for prediction
input_data = {
    'Age': age,
    'Gender': gender,
    'Obedient': obedience,
    'ConfidenceScore': confidence,
    'EmotionScore': emotion_score,
    'ConsistencyScore': consistency_score,
}

# Load the trained model
model =
deployment.load_trained_model('path_to_trained_model.pkl')

# Make a prediction using the model
prediction = deployment.make_prediction(model, input_data)

# Store the prediction result and input data in the database
database.store_prediction_result(name, age, gender,
prediction)

if __name__ == "__main__":
    main()
```

- In this code, we import the necessary modules (dataRetrieval, training, deployment, sentimentAnalysis, and database) and define a main function that performs the following steps:
- Prompt the suspect to enter their information (name, age, gender).
- Pass the suspect's information to the sentiment analysis module (sentimentAnalysis) to calculate obedience, confidence, emotion score, and consistency score.
- Prepare the input data for prediction, combining suspect information and sentiment analysis results.
- Load the trained machine learning model using the deployment module (deployment).
- Make a prediction using the loaded model based on the input data.
- Store the prediction result and input data in the database using the database module (database).
- You can further refine and expand the main function and other modules as needed to meet the specific requirements of your project.