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1. Introduction

Build a machine learning API similar to the Cupid API's Room Match feature. The API should handle POST requests and return sample request/response payloads in a similar format to the [Cupid Room Match API](#). Provide a detailed explanation of your development process, including how you collect and process data, develop models, and scale the system.

2. Requirements

- **Data Collection:** Describe how you would gather relevant data for the model.
 - Links ->
https://drive.google.com/file/d/1hKgQ3JwGIMVxdx3c41oas89QoXrsez56/view?usp=drive_link
https://drive.google.com/file/d/1mLQ3O0ybTfNzJF_eC2nC1PIMBUlsFJI7/view?usp=drive_link
- **Data Processing:** Explain the preprocessing steps such as cleaning, feature extraction, and normalization.
- **Model Development:** Provide a model training pipeline, including model selection, hyperparameter tuning, and evaluation metrics.

3. Bonus Points

- **Model Performance:** Use advanced ML models and demonstrate improvements in accuracy or efficiency.
- **Model Explainability:** Provide model interpretability or explainability features.
- **Automated Pipelines:** Automate the data processing and model training workflows.

4. Submission Instructions

- **Codebase:** GitHub repository with setup and running instructions.
- **Model Documentation:** Include a detailed model development process document.
- **Tests & Results:** Include test coverage reports and evaluation results.

5. Evaluation Criteria

- **Correctness & Functionality:** API works as expected with well-defined endpoints.
- **Model Accuracy:** Quality of model performance and evaluation results.
- **Data Processing:** Effective data collection, cleaning, and transformation.
- **Innovation & Creativity:** Use of advanced techniques, extra features, or unique approaches.

Good luck! Feel free to reach out with any questions.