Graded Assignment

Quality, Requirements, Architecture, and Microservices.

Note:- this assignment is a continuation of the TA session case study.

PART 1: TA Session Case Study

PART 2: Graded Assignment

Objective:

Implementing a microservice using the Python Flask framework on an Ubuntu virtual machine to serve a machine learning prediction model.

To create a Docker image containing everything needed to run the application: the application code, libraries, tools, dependencies, and other files and to use the image to run the application in containers.

Steps to be performed:

1. Host a Ubuntu Virtual Machine using Oracle VM Virtual Box. (5 marks)
2. Set up Visual Studio code on Ubuntu VM. (5 marks)
3. Set up Python. (5 marks)
4. Clone this Github repository https://github.com/Vikas098766/Microservices.git (1 mark)
5. Create a Virtual Environment. (1 mark)
6. Install the dependencies from requirements.txt file. (1 mark)
7. Train and save the model. (2 marks)
8. Test the Flask web application. (5 marks)
9. Test the application and make predictions using the example calls available in the folder **/tests.** (5 marks)
10. Create a docker image containing everything needed to run the application.(10 marks)
11. Run the containerized application as a prediction service and test it locally by passing some example calls and get the prediction. (10 marks)

Solution Submission Instructions :

- Create a git repository name it as {YourName W11_Graded Assignment },**make it public**
  - Push your solution files to the repository.
  - Submit the git URL link in the text entry box.
- Create a document and mention the steps performed, commands for that specific task, and screenshots for each step.

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