

Test for Middle Python Developer (Machine Learning/AI)

Task 1: Creating a neural network

Create a simple neural network in Python using TensorFlow or any other machine learning framework. The network must be capable of classifying images from the MNIST dataset.

Train your neural network and evaluate its performance. Provide a report that includes accuracy and loss metrics.

Describe how you configured and trained your network and explain which options you chose and why.

Task 2: Working with databases

Create a simple SQL or NoSQL database depending on your preferences and write a Python script to interact with it.

Your script must be capable of adding, retrieving, updating, and deleting data.

Explain how you organized your database and why you chose that particular structure.

Task 3: Integration with a Google API

Write a Python script that uses a Google API to get information. This can be any API (eg. Google Maps, Google Analytics, Google Sheets, etc.).

Your script must be capable of sending requests to the API and processing the received data.

Explain how you organized your code and what data processing approaches you chose.

Task 4: Documentation

Write comprehensive documentation for each of the previous tasks, describing the capabilities of your code, its installation and usage as well as other important details a user should know.

Provide all your answers and code in the GitHub repository. Make sure your code is well-organized and easy to read. We value code cleanliness and adherence to best software development practices.

Good luck!