



Scopic

sales@scopicsoftware.com
+1 (508) 886-3240,
+1 (855) 717-5586 (toll free)
12 Carly Circle,
Rutland, MA, 01543, US
scopicsoftware.com



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Machine Learning Test Task

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jobs@scopicsoftware.com

Task 1. Choosing Model:

In this task, you need to find a paper that shows an approach to generate an image based on an input text. Ensure the chosen paper has been published in the last five years and has an open-source implementation. You may use [this site](#) to find one.

Then, you need to run the code training for a single epoch and deliver the following output.

- A readme file that shows the following.
 - o How to install the code requirements.
 - o Steps to run the training.
 - o Sample input/output after your training.
 - o Name and link to the training dataset.
 - o The number of model parameters to determine the model's complexity.
 - o The model evaluation metric (The one you calculated in the code, not the paper stated one)
- The trained model
- Code files and highlight any modifications you made to the original code, if any.

Task 2. Using the model in a web application:

In this task, it is required that you create a sample web page in any web framework you know that takes text as an input and outputs the image result. Again, it should use the model you trained in the previous task.

It would be best if you delivered the following output for the task.

- Well-documented and organized code following the best practices for web development.
- The source codes.
- A readme file that shows the following.
 - o How to install the code requirements and run it.
 - o A screenshot of the output.

Task 3. Demonstration and discussion:

In the first part of this task, you need to describe how your solution works to generate an image from text. Imagine that you are telling it to a client with no technical ML experience. Use simple language to conduct the idea with details enough to justify the time you take for those tasks.

Imagine that your work is well received in the second part of the task. The client wants to move it to production and consume the model from multiple devices (iOS, Android, IoT, and web). What considerations should we take while deploying this model? Consider the following points while you are thinking about the answer.

- Is it better to deploy the model on a server and all devices consume it using an API? Or to deploy it on each device? How?
- How to scale our solution?
- The specs of the hosting machine, Cloud, etc.
- Tools and frameworks that could simplify the deployment process.



- Suppose we got more data batches post-production for model tuning. How could we avoid biasing the new data in favor of the original one?