

Share



13.2 g per iterations in colab of 100 gpu units tell at which the iteration will terminate



To determine the iteration at which a Colab notebook will terminate, given a GPU usage of 13.2 GB per iteration and a limit of 100 GPU units, you need to understand the relationship between GPU usage and GPU units in Colab.

Colab provides a certain amount of GPU time (units) to users, and this is distributed over a billing cycle. However, the exact conversion between GPU usage (in GB) and GPU units is not explicitly documented by Google Colab. The GPU units typically depend on the type of GPU (e.g., T4, P100) and how long you use it.

Assuming the 100 GPU units are a simplified representation of the total GPU time available, you can estimate the termination iteration if you know the GPU usage per iteration in terms of GPU units. Since you mentioned 13.2 GB per iteration but not how it translates to GPU units, I'll provide a general approach:

1. **Determine the GPU usage per iteration in units:** This step is crucial but requires knowing how Colab translates GB usage into GPU units. Let's denote this conversion factor as c units/GB.
2. **Calculate total usage per iteration in units:** Multiply the GPU usage per iteration (in GB) by the conversion factor c .
3. **Calculate the number of iterations until termination:** Divide the total GPU units available by the total usage per iteration.

Since we do not have the exact conversion factor, let's denote it as c . The formula to find the termination iteration I is:

$$I = \frac{100 \text{ GPU units}}{13.2 \text{ GB} \times c \text{ units/GB}}$$

Let's assume a hypothetical value for c (for example, 0.5 units/GB). You can adjust this value based on your actual experience or more precise data.

For $C = 0.5$ units/GB:

$$I = \frac{100 \text{ GPU units}}{13.2 \text{ GB} \times 0.5 \text{ units/GB}} \quad I = \frac{100}{6.6} \quad I \approx 15.15$$

Therefore, the notebook would terminate after approximately 15 iterations under this assumption.

If you have more specific information about the conversion factor or how Colab accounts for GPU usage, you can replace c with that value to get a more accurate result.



ok for 7.2 g



To determine the iteration at which a Colab notebook will terminate with a GPU usage of 7.2 GB per iteration and a limit of 100 GPU units, we will follow a similar approach as before.

Given:

- GPU usage per iteration: 7.2 GB
- Total GPU units available: 100 units
- Conversion factor: C units/GB (this needs to be determined based on Colab's internal accounting, but let's assume a hypothetical value for this example)

Assume a hypothetical conversion factor C of 0.5 units/GB (you can adjust this based on actual data if available).

The formula to find the termination iteration I is:

$$I = \frac{100 \text{ GPU units}}{7.2 \text{ GB} \times C \text{ units/GB}}$$

Using $C = 0.5$ units/GB:

$$I = \frac{100 \text{ GPU units}}{7.2 \text{ GB} \times 0.5 \text{ units/GB}} = \frac{100}{3.6} I \approx 27.78$$

Therefore, the notebook would terminate after approximately 28 iterations under this assumption.

If you have a different conversion factor or more precise data, you can replace C with that value to get a more accurate result.

ok for 100 iterations



To determine if you can complete 100 iterations given a GPU usage of 7.2 GB per iteration and a total of 100 GPU units, we need to check if the total GPU usage for 100 iterations fits within the 100 GPU units available.

Given:

- GPU usage per iteration: 7.2 GB
- Number of iterations: 100
- Total GPU units available: 100 units
- Conversion factor: C units/GB (assume a hypothetical value, e.g., 0.5 units/GB)

First, calculate the total GPU usage in GB for 100 iterations:

$$\text{Total GPU usage in GB} = 7.2 \text{ GB/iteration} \times 100 \text{ iterations} = 720 \text{ GB}$$

Now, convert this total GPU usage into GPU units using the conversion factor C :

$$\text{Total GPU usage in units} = 720 \text{ GB} \times C \text{ units/GB}$$

Assuming $C = 0.5$ units/GB:

$$\text{Total GPU usage in units} = 720 \text{ GB} \times 0.5 \text{ units/GB} = 360 \text{ units}$$

Since the total GPU units required (360 units) exceed the available GPU units (100 units), you would not be able to complete 100 iterations.

To find the maximum number of iterations I that can be completed within the 100 GPU units, use the formula:

$$I = \frac{100 \text{ GPU units}}{7.2 \text{ GB/iteration} \times C \text{ units/GB}}$$

Using $C = 0.5$ units/GB:

$$I = \frac{100 \text{ GPU units}}{7.2 \text{ GB} \times 0.5 \text{ units/GB}} = \frac{100}{3.6} \approx 27.78$$

Therefore, you can complete approximately 28 iterations with the available 100 GPU units.