



Introduction to GCP

Vertex AI is Google Cloud platform for machine learning tasks. It provides tools to train, deploy, and manage ML models.

Jupyter Notebook: By using **Vertex Al Notebooks**, you have a Jupyter Notebook environment pre-configured with access to powerful resources(GPUs and TPU)

Advantages: Minimum Setup, No need to handle big data, No need to configure machine learning libraries.

It's designed for ML task by offering resources that are ready for large-scale data processing.



Cloud Shell

What is Cloud Shell? -> Terminal for google cloud

: Interactive command-line environment provided by Google Cloud

Why is it useful?

: Because it comes with **Google Cloud CLI** (command-line interface), which allows you to manage your resources (like Vertex AI instances) directly from the terminal.



Cloud Shell + Vertex Al

How do they work together?:

Google Cloud Shell is a place to configure and manage our project and Vertex Al Notebooks is where we actually run our ML code

Why can't we simply copy their Github code to our VS Code?

- -local machine do not have powerful hardware
- -Vertex AI provides access to Google Cloud resources which reduces training time significantly
- -Easy access to google's stored data



So what is our plan?

Step 1: Set up our project using Cloud Shell (create resources, set configurations, make project, make instances).

Step 2: Use Vertex AI for heavy ML workloads, training, or running large datasets.

Step 3: After completing the work save code and outputs back to GitHub(free) or Google Cloud Storage(expensive) for later use.

Let's have a look on Google Cloud Now