Research Project: How do I get MLOps working within Vertex AI with version tracking?

Installation Manual

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1   Requirements

1.1   Google Account – Google Cloud Platform Free Credit

To consider running this yourself you must have a google account. With each account you can get free credit added to your account (https://console.cloud.google.com/freetrial) which comes with $300 worth of credits which will last 90 days.

2   Setting up the Google Cloud Platform environment

2.1   Make a new project

Making a new project is fairly easy. You can personalize the name to your own likings. (https://cloud.google.com/resource-manager/docs/creating-managing-projects#creating_a_project).

2.2   Create a user managed jupyter notebook in Vertex AI

Make your way to the Vertex AI Platform. Once there go to the "Workbench" tab which can be found on the right of the screen.

We will be making a User-Managed Notebook. Navigate to that tab on the top of the screen. Hit "New Notebook" and choose TensorFlow Enterprise > 2.3 (with LTS) > Without GPUs.

You will be able to give it a name to your own likings and choose your preferred region and zone within that region. These are all personal choices.

You can choose for a more advanced setup by clicking the advanced settings. It is useful to know that the default creation of a new notebook does not take the cheapest machine configuration. Make sure you don't overspend for no reason. I suggest changing the machine configuration to a n1-standard-1. This is all up to your personal preference.

Once you're done setting up you can hit "Create".

Wait for the notebook to be created and go in by pressing "Open Jupyterlab". You are now ready for the next step.

2.3   Clone the Github repository

With the previous step being done you can now clone the repository which contains the needed code to repeat this research.

Find the Git tab on the screen and look the for "Clone a repository" option. Copy-paste the following link into the input box: https://github.com/ThysEmiel/VertexAI-MLOps.git. Hit "Clone" when done so.

It will download all the files to your workspace in the notebook. You are now ready for the run the code step.

2.4   Run the code

Find and open the "VertexAI Pipeline.ipynb" which comes with the repository you just cloned. All steps are explained in each part of the notebook. Make sure to carefully read all of this!