



Kubeflow Pipelines – Vertex AI

- An open-source project for deployments of ML workflows
- An engine build on top of Kubernetes for scheduling multi-step ML workflows
- An SDK for defining and manipulating pipelines and components
- Notebooks for interacting with the system using the SDK
- A user interface (UI) for managing and tracking jobs, steps and runs
- ✓ **Steps involved in a Machine learning pipeline :**
 - Data collection
 - Model training
 - Model evaluation
 - Model deployment and serving



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- **Component** : A self-contained set of code that performs one step in your ML workflow .Every component consists of :
 - **Inputs and Outputs**
 - **Container image** that the code will run inside of
 - **Metadata** – Name , description etc
- **DSL Pipelines** (Domain specific language) : Includes the DSL as well as Python libraries to interact with the Kubeflow Pipeline APIs .
- **DSL Compiler** : Compiles the python script into a single YAML file that the underlying services can read and process



Course Overview

- Cloud Run
- Cloud Functions
- App Engine
- Vertex AI - Model Training & Deployment