MLOps workshop resources and setup

# Resources

An overview of all the resources need for the workshop.

## Microsoft

### Visual Studio

* Participants need a Visual Studio Enterprise subscription connected to their Active Directory account.

## code.cognizant.com

* There is a repo with the code for the instructors and a repo for the participants

## Azure

### DevOps

* An Azure DevOps organization
  + A project inside this organization needed for setup

### Resource group

* An Azure Resource Group

### Service principal

* An Azure Service principal with Contributor access to the resource group.

# Set up

For set up, I am assuming that this is performed by an entity with sufficient rights to all resources to perform the steps below.

#### Initial set up

* Create a service connection for the service principal in the set up project.
* Get the code from the instructor repo in code.cognizant.com to the repo of the Azure DevOps setup project.
* From the set up project, create but do not run a pipeline from the bootstrap branch with the environment\_setup\deploy-resources.yml file.
* Create a variable group in the project called devopsforai-aml-vg with the following keys:
  + AZURE\_RM\_SVC\_CONNECTION, name of the service connection
  + LOCATION, location where the pipeline should create the resources. This location should have enough cores available for Azure Machine Learning studio to accommodate all groups. Each group uses two cores.
  + RESOURCE\_GROUP, the name of the created resource group

#### For each new workshop

* Determine the amount of groups.
* Edit the team numbers in the setup pipeline and commit
* Run the setup pipeline
* Create a project for each group

#### For each project

* Initialize the participants repo from code.cognizant.com in the repo of the project
* Disable Boards and Artifacts in the project settings
* Add the participants to the project
* Create a service connection to Azure Machine Learning studio using the service principal
* Set policies on the branches of the repo to prevent deleting of and pushes to the initial branches. Set the assignment branch as the default branch
* Create a variable group in the project called devopsforai-aml-vg with the following keys:
  + BASE\_NAME, unique name of the group. Max 7 alphanumerical characters, e.g. mlopsg1
  + RESOURCE\_GROUP, name of the created resource group
  + WORKSPACE\_SVC\_CONNECTION, name of the service connection to Azure Machine Learning studio
* Add participants as contributors to the Azure Machine Learning resource and storage account resource in the resource group through Azure portal.

# Finalize

To finalize I am assuming that this is performed by an entity with sufficient rights to all resources to performs the steps below.

* remove all resources: select all resources in the resource group and delete them
  + Either delete the DevOps projects or if you want to reuse them clean the Devops projects:
    - remove all pipelines
    - remove repo
    - remove users