**AI510\_Andre\_Neptune\_Jr**

**PE07: Programming Exercise**

**Instruction**

**Resource:**

* Kubernetes, (n.d), Production-Grade Container Orchestration <https://kubernetes.io/>
* minikube, (n.d), minikube start, <https://minikube.sigs.k8s.io/docs/start/>
* Kubernetes, (n.d), Set up Ingress on Minikube with the NGINX Ingress Controller <https://kubernetes.io/docs/tasks/access-application-cluster/ingress-minikube/>

Your task for this Programming Exercise is to achieve a similar behavior as HOS07A but deploy a prebuilt nginx container with a minor modification to the configuration YAML file.

1. Create duplicate of the “hos\_config.yaml” file and change file name to “pe\_config.yaml”
2. From the copied “hos\_config.yaml” file, follow around “!!!! Edit this for PE” comment to review where the edits are required.
3. For the image, use image: nginx instead of HOS07A used image. As written in the containerPort, the prebuilt nginx page container uses port 80.

**Note**: you can delete/clean up the minikube cluster by running the minikube delete command after the PE.

**Submit the items below to the PE submission page:**

1. The GitHub link of your “pe\_config.yaml” config script commits.
2. Provide a 20 to 50 words analysis or thoughts for setting up a local web application backend with the screenshot after completing task step 3.
3. Make sure the PE module number and your name are written on the file name (e.g., "*PE01\_YourName.docx").*

*In this assignment, we deployed a simple web application using Kubernetes, Minikube, and NGINX. We configured a namespace, deployment, service, and ingress to manage our application, which runs inside containers. By setting up an Ingress controller, we accessed the app at a specific URL, all within a local Kubernetes cluster.*