**Infrastructure deployment YAML** for Azure services and a **Dockerfile** for application deployment.

Azure\_deployment.yaml

|  |
| --- |
| # Azure Infrastructure Deployment  **resources**:  **- type**: Microsoft.Web/sites  **apiVersion**: 2021-02-01  **name**: delivery-optimization-api  **location**: eastus  **properties**:  **serverFarmId**: /subscriptions/{subscription-id}/resourceGroups/{resource-group}/providers/Microsoft.Web/serverfarms/{app-service-plan}  **siteConfig**:  **linuxFxVersion**: "DOCKER|your-docker-image"    **- type**: Microsoft.CosmosDB/databaseAccounts  **apiVersion**: 2021-06-15  **name**: delivery-optimization-db  **location**: eastus  **kind**: GlobalDocumentDB  **properties**:  **databaseAccountOfferType**: Standard  **- type**: Microsoft.ContainerService/managedClusters  **apiVersion**: 2021-07-01  **name**: delivery-optimization-aks  **location**: eastus  **properties**:  **dnsPrefix**: delivery-opt-cluster  **agentPoolProfiles**:  **- name**: nodepool1  **count**: 3  **vmSize**: Standard\_DS2\_v2  **enableRBAC**: **true** |

Docker File:

|  |
| --- |
| # Dockerfile **for** Deployment  # Use official Python image as base  FROM python**:**3.9  # Set the working directory **in** the container  WORKDIR **/**app  # Copy project files to the container  COPY **.** **.**  # Install dependencies  RUN pip install **-**r requirements**.**txt  # Expose API port  EXPOSE 5000  # Run the Flask API  CMD **[**"python"**,** "route\_optimization.py"**]** |