AI-Native KRA – DevOps Assignment 3 (IaC + Cloud Deployment)

Goal

Take your CI/CD Pipeline Health Dashboard (Assignment 2) and **deploy it to the cloud using Infrastructure-as-Code (IaC)**.

You will use **AI-native tools (ChatGPT, Copilot, Cursor)** to help generate, debug, and document your IaC scripts.

Tasks

1. **Provision Infrastructure with IaC**
   a. Use **Terraform** (preferred) to create:
      i. A VM/Compute instance (EC2, GCP VM, or Azure VM)
      ii. Networking basics (VPC + Security Group/Firewall)
      iii. A managed DB (if your app needs one, e.g., RDS/Postgres/CloudSQL)
   b. **Deploy Your App**
      i. Use Terraform to install Docker + deploy your containerized app (from Assignment 2).
      ii. App should be accessible via a public URL/IP.
2. **AI-Native Workflow**
   a. Use AI tools (ChatGPT, Copilot, Cursor) for:
      i. Generating Terraform code
      ii. Writing deployment scripts
      iii. Creating documentation

Expected Outcome

- A **live dashboard running on cloud** (AWS/GCP/Azure)
- Infrastructure fully provisioned with **Terraform** (not manual clicks)

- Documentation showing **how AI tools were used**

Deliverables

1. **Terraform Scripts** – committed to GitHub repo (`/infra` folder).
2. **Deployment Guide** (`deployment.md`)
   a. How to apply Terraform & deploy app
   b. AI prompts/examples used
3. **Prompt Logs** – record of prompts used (`prompts.md`).