# Helm Chart Deployment for Pokemon Script

## Steps Followed

### 1. Dockerizing the Python Script

1. Created a Dockerfile:

|  |
| --- |
| FROM python:3.11-alpine WORKDIR /app COPY pokemon.py . RUN pip install requests ENTRYPOINT ["python”, “pokemon.py"] |

2. Built the Docker image:

|  |
| --- |
| docker build -t pokemon-scanner . |

3. Tag & Pushed the image to Docker Hub:

|  |
| --- |
| docker tag pokemon-scanner omkarhatlage17/pokemon-scanner:latest  docker push omkarhatlage17/pokemon-scanner:latest |

### 2. Creating the Helm Chart

1. Created a Helm chart:

|  |
| --- |
| helm create poke |

cd poke

2. Updated values.yaml:

|  |
| --- |
| replicaCount: 1  image:  repository: omkarhatlage17/pokemon-scanner  pullPolicy: Always  tag: latest  service:  enabled: false  resources:  limits:  cpu: 500m  memory: 128Mi  requests:  cpu: 250m  memory: 64Mi  nodeSelector: {}  tolerations: []  affinity: {} |

3. Modified templates/deployment.yaml:

|  |
| --- |
| apiVersion: apps/v1 kind: Deployment metadata:  name: {{ .Release.Name }}  labels:  app: {{ .Release.Name }} spec:  replicas: {{ .Values.replicaCount }}  selector:  matchLabels:  app: {{ .Release.Name }}  template:  metadata:  labels:  app: {{ .Release.Name }}  spec:  containers:  - name: pokemon-container  image: "{{ .Values.image.repository }}:{{ .Values.image.tag }}"  imagePullPolicy: {{ .Values.image.pullPolicy }}  command: ["/bin/sh", "-c", "sleep infinity"]  resources:  limits:  cpu: {{ .Values.resources.limits.cpu }}  memory: {{ .Values.resources.limits.memory }}  requests:  cpu: {{ .Values.resources.requests.cpu }}  memory: {{ .Values.resources.requests.memory }} |

### 3. Deploying the Helm Chart

1. Installed/Upgraded the Helm release:

|  |
| --- |
| helm upgrade --install poke ./poke |

2. Verified the running pods:

|  |
| --- |
| kubectl get pods |

Example Output:

|  |
| --- |
| legend@legend:~/Documents/Test$ kubectl get pods  NAME READY STATUS RESTARTS AGE  my-api-5ccf998446-rvv7m 1/1 Running 1 (345d ago) 346d  my-api-5ccf998446-xxd6m 1/1 Running 1 (345d ago) 346d  poke-6ff967fcd8-x4knt 1/1 Running 0 7s |

### 4. Manually Executing the Script

1. Get the running pod name:

|  |
| --- |
| kubectl get pods |

2. Access the running poke pod:

|  |
| --- |
| kubectl exec -it poke-6ff967fcd8-x4knt -- sh |

3. Execute the Pokemon script:

|  |
| --- |
| /app # python pokemon.py pikachu |

4. Output & Exit the container:

|  |
| --- |
| {  "name": "pikachu",  "base\_experience": 112,  "height": 4,  "weight": 60,  "abilities": [  "static",  "lightning-rod"  ]  }  /app # exit |