

# Checklist for turtle DevOps

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## Mục lục

<b>1</b>	<b>Python for Data Science</b>	<b>3</b>
1.1	Panda . . . . .	3
1.2	numpy . . . . .	3
1.3	RESTAPI and Web Scraping . . . . .	3
1.4	Python Packaging, Linting and Unit testing . . . . .	3
1.5	Flask . . . . .	3
<b>2</b>	<b>Container and Containerazation</b>	<b>3</b>
2.1	Docker . . . . .	3
2.2	Kubernettes . . . . .	4
2.3	RedHat OpenShift . . . . .	4
<b>3</b>	<b>MicroServices</b>	<b>5</b>
3.1	Building, documenting and testing API . . . . .	5
3.2	Serverless . . . . .	5
<b>4</b>	<b>Testing</b>	<b>5</b>
4.1	PyUnit, Pytest . . . . .	5
4.2	Test Coverage . . . . .	5
4.3	Factory and Faker . . . . .	5
4.4	BDD Tools . . . . .	6

<b>5</b>	<b>CI/CD</b>	<b>6</b>
5.1	CI Tools: . . . . .	6
5.2	CD Tools: . . . . .	6
5.3	GitOps: ArgoCD . . . . .	6
<b>6</b>	<b>Security</b>	<b>6</b>
6.1	Static analysis: . . . . .	6
6.2	Dynamic analysis: . . . . .	6
<b>7</b>	<b>Monitoring</b>	<b>7</b>
7.1	Prometheus . . . . .	7
7.2	Grafana . . . . .	7
7.3	OpenTelemetry . . . . .	7
7.4	Mezmo . . . . .	7
<b>8</b>	<b>Roadmap</b>	<b>7</b>

# 1 Python for Data Science

## 1.1 Panda

<https://pandas.pydata.org/docs/>

## 1.2 numpy

<https://numpy.org/doc/stable/>

## 1.3 RESTAPI and Web Scraping

Requests library:

<https://docs.python-requests.org/en/latest/index.html>

BeautifulSoup:

<https://beautiful-soup-4.readthedocs.io/en/latest/#quick-start>

## 1.4 Python Packaging, Linting and Unit testing

Packaging:

<https://packaging.python.org/en/latest/>

Linting:

<https://pylint.readthedocs.io/en/latest/>

Unit testing:

<https://docs.python.org/3/library/unittest.html>

## 1.5 Flask

<https://flask.palletsprojects.com/en/3.0.x/>

# 2 Container and Containerization

## 2.1 Docker

Documentation: <https://docs.docker.com/>

List of basic concept:

- Container

- Container Image
- Docker Objects

## 2.2 Kubernetes

Documentation: <https://kubernetes.io/docs/home/>

List of basic concept:

- Kubernetes Object
- Kubectl
- ReplicaSet
- Autoscaling
- Rolling updates
- ConfigMaps
- Secrets
- Service bindings

## 2.3 RedHat OpenShift

Documentation: <https://docs.openshift.com/>

List of basic concept:

- Builds
- Operators
- Istio

## 3 MicroServices

### 3.1 Building, documenting and testing API

OpenAPI specification is a standard way of representing APIs

**Postman:**

<https://learning.postman.com/docs/publishing-your-api/documenting-your-api/>

**Swagger:**

<https://swagger.io/docs/>

### 3.2 Serverless

**AWS:**

- <https://docs.aws.amazon.com/>
- <https://www.youtube.com/watch?v=zA8guDqfv40>

## 4 Testing

### 4.1 PyUnit, Pytest

**PyUnit:**

<https://docs.python.org/3/library/unittest.html>

**Pytest:**

<https://docs.pytest.org/en/stable/>

### 4.2 Test Coverage

<https://coverage.readthedocs.io/en/7.6.1/>

### 4.3 Factory and Faker

**Factory**

<https://factoryboy.readthedocs.io/en/stable/index.html>

**Faker** <https://faker.readthedocs.io/en/master/>

Note: Mock in Unittest Framework is worth to read.

## 4.4 BDD Tools

### Behave

<https://behave.readthedocs.io/en/stable/>

### Selenium

<https://selenium-python.readthedocs.io/>

## 5 CI/CD

### 5.1 CI Tools:

- Github Actions
- Circle CI
- GitLab CI

### 5.2 CD Tools:

#### Tekton:

<https://tekton.dev/docs/>

### 5.3 GitOps: ArgoCD

<https://argo-cd.readthedocs.io/en/stable/>

## 6 Security

### 6.1 Static analysis:

SonarQube <https://docs.sonarsource.com/sonarqube/latest/>

Snyk: <https://snyk.io/>

### 6.2 Dynamic analysis:

#### OWASP ZAP

<https://www.zaproxy.org/docs/>

## 7 Monitoring

### 7.1 Prometheus

Prometheus Monitoring system docs:

<https://prometheus.io/docs/introduction/overview/>

### 7.2 Grafana

Grafana Monitoring Platform:

<https://grafana.com/>

### 7.3 OpenTelemetry

Open Telemetry can be used with K8s

<https://opentelemetry.io/docs/>

### 7.4 Mezmo

Mezmo, log analyzer docs:

<https://docs.mezmo.com/>

## 8 Roadmap

<https://roadmap.sh/devops>