DevOps Assignment

May 24, 2019

Task 1 - Packaging

Create a python package out of the previously written script.

- Create a setup.py for the python code
- The result of `pip install <package>` should be the creation of a command line script which can be used as described in the previous task

The following should work:

```
python setup.py sdist
pip install <package>
<script-name> args
```

Task 2 - CI

Create a CI Pipeline in a tool of your choice (circleci should work fine with github). The pipeline should include:

- Build the package
- Run the tests
- Export the package as a build artifact (last n versions should be downloadable from the CI tool)
- (optional) Deploy it somewhere (private pypi repo/ftp server/dropbox/...)

Task 3 - Containerization

Create a minimal docker image which, when run, will execute the script. The following should produce the same result as in the first task:

```
docker <docker args> run <package-image> args
```

Results should be visible outside of the docker container.

Task 4 - FaaS

Create a docker image which is a FaaS when run. The container run from the image should be a http server which receives the measurement file and returns either the plot or .zip file with the plots.

The following command should download the results for the input file

```
curl -F 'file=@path/to/input/file' <service-url>
```

Here would be beneficial to use watchdog (not mandatory).