**Module Hands-on Lab**

Today’s lab, in line with module’s coursework is composed by two core components. Namely, illustrative Streamlit introduction and deployment on cloud infrastructures. The latter being Heroku and Google Cloud Platform (GCP).

**1)** [**Streamlit**](https://streamlit.io/) **app**

Install Streamlit within your environment:

* pip install streamlit==1.12.2

Play around with Streamlit’s API (it’s a pip-install away) and specifically with:

* Create a multi-page app, to grasp the following concepts:
  + App folder name
  + Apps naming and ordering
  + Emoji inclusion
* Input widgets (<https://docs.streamlit.io/library/api-reference/widgets>)

**Quick links:**

* [**Streamlit API Documentation**](https://docs.streamlit.io/library/api-reference)
* [**Multipage Streamlit Apps**](https://blog.streamlit.io/introducing-multipage-apps/)
* [**I tried to build a Python Machine Learning Streamlit App in 7 Minutes | Coding Challenge**](https://youtu.be/Ebb4gUI2IpQ)

**2)** [**Heroku**](https://www.heroku.com/) **/** [**GCP**](https://cloud.google.com/gcp/?hl=it&utm_source=google&utm_medium=cpc&utm_campaign=emea-it-all-it-bkws-all-all-trial-e-gcp-1011340&utm_content=text-ad-none-any-DEV_c-CRE_527980088521-ADGP_Hybrid%20%7C%20BKWS%20-%20EXA%20%7C%20Txt%20~%20GCP%20~%20General%23v3-KWID_43700060384861759-kwd-87853815-userloc_1008463&utm_term=KW_gcp-NET_g-PLAC_&gclid=EAIaIQobChMIm-bHuoaZ-gIVlo9oCR3SoATREAAYASAAEgIJQvD_BwE&gclsrc=aw.ds) **deployment**

**Preliminary:**

1. Share your repository on GitHub
2. Create an account on Heroku and GCP

**Heroku**

1. Create:
   1. **Requirements.txt**
   2. **setup.sh**  
      *mkdir -p ~/.streamlit/*

*echo "[server]" >> ~/.streamlit/config.toml*

*echo "headless = true" >> ~/.streamlit/config.toml*

*echo "port = $PORT" >> ~/.streamlit/config.toml*

*echo "enableCORS = false" >> ~/.streamlit/config.toml*

*echo "[global]" >> ~/.streamlit/config.toml*

*echo "developmentMode = false" >> ~/.streamlit/config.toml*

* 1. **Procfile***web: sh setup.sh && streamlit run name\_of\_your\_main\_app\_script.py*