

# Data Intake Report

Name: Cloud and API deployment

Report date: 28.03.2021

Internship Batch:LISP01

Version:1.0

Data intake by: Ines Perko

Data intake reviewer:<intern who reviewed the report>

Data storage location: <https://github.com/inesp93/Cloud-and-API-deployment>

## Tabular data details: (salesdata.csv)

<b>Total number of observations</b>	14
<b>Total number of files</b>	1
<b>Total number of features</b>	4
<b>Base format of the file</b>	.csv
<b>Size of the data</b>	312 bytes

## Proposed Approach:

The used model is the model from the previous assignment "Deployment on Flask". It consists of the files index.html, style.css, app.py, model.py, request.py and salesdata.csv. The used machine learning model is linear regression. The user can fill out three fields (rate of interest, first-quarter sales, and second-quarter sales). There is a button that gives the prediction of the sales in the third quarter when it is pressed. The location of the project is <https://github.com/inesp93/Deployment-on-Flask>.

The next step was to create an account at Heroku.com and to install 'The Heroku CLI'. The Git Bash is used for further steps, but first, it is restarted so that it can recognize that Heroku is installed. After opening the folder where my model is (in my case ~/workspace/cloud\_api), the following commands are used:

```
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api
$ pip install gunicorn
Requirement already satisfied: gunicorn in c:\python39\lib\site-packages (20.1.0)
Requirement already satisfied: setuptools>=3.0 in c:\python39\lib\site-packages (from gunicorn) (49.2.1)

HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api
$ touch Procfile

HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api
$ pip freeze > requirements.txt
```

The used code in the file Procfile is: web: gunicorn app:app. The freeze command created requirements.txt.

Furthermore, a Git repository is created.

```
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api
$ git init
Initialized empty Git repository in C:/Users/HT-ICT/Workspace/Cloud_API/.git/

HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ git add .
```

Then, the commit command is used.

```
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ git commit -am 'initial commit'
[master (root-commit) cfa3395] initial commit
11 files changed, 237 insertions(+)
create mode 100644 Procfile
create mode 100644 app.py
create mode 100644 hiring.csv
create mode 100644 model.pkl
create mode 100644 model.py
create mode 100644 request.py
create mode 100644 requirements.txt
create mode 100644 salesdata.csv
create mode 100644 salesdata.ods
create mode 100644 static/css/style.css
create mode 100644 templates/index.html
```

After the heroku login command, the web browser to log in is open.

```
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ heroku login
» Warning: Our terms of service have changed:
» https://dashboard.heroku.com/terms-of-service
heroku: Press any key to open up the browser to login or q to exit: y
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/8585ff2d-0fd1-44
a1-a8c5-e2d00b99aca3?requestor=SFMyNTY.g2gDbQAAAw5MS4wLjIwNC4xNTZuBgDxMR16eAFiA
AFRgA.V8izRUdF6JLy-BbmB0Su7sMja7oYr9EkmiBLm27bylg
heroku: Waiting for login...
Logging in... done
Logged in as ines.perko93@gmail.com
^C^CTerminate batch job (Y/N)? y
y

HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ heroku create
Creating app... done, secure-lake-58933
https://secure-lake-58933.herokuapp.com/ | https://git.heroku.com/secure-lake-58
933.git
```

After I logged in with my account, I used heroku create command and I copy-pasted the link that I got (secure-lake-58933) in the web browser. I got the following:

## Heroku | Welcome to your new app!

Refer to the [documentation](#) if you need help deploying.

I changed the name of the link, so I used heroku rename command. Finally, the git push heroku master command is used.

```
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ heroku rename projectweek5
Renaming secure-lake-58933 to projectweek5... done
https://projectweek5.herokuapp.com/ | https://git.heroku.com/projectweek5.git
! Don't forget to update git remotes for all other local checkouts of the
! app.
Git remote heroku updated

HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ ^C

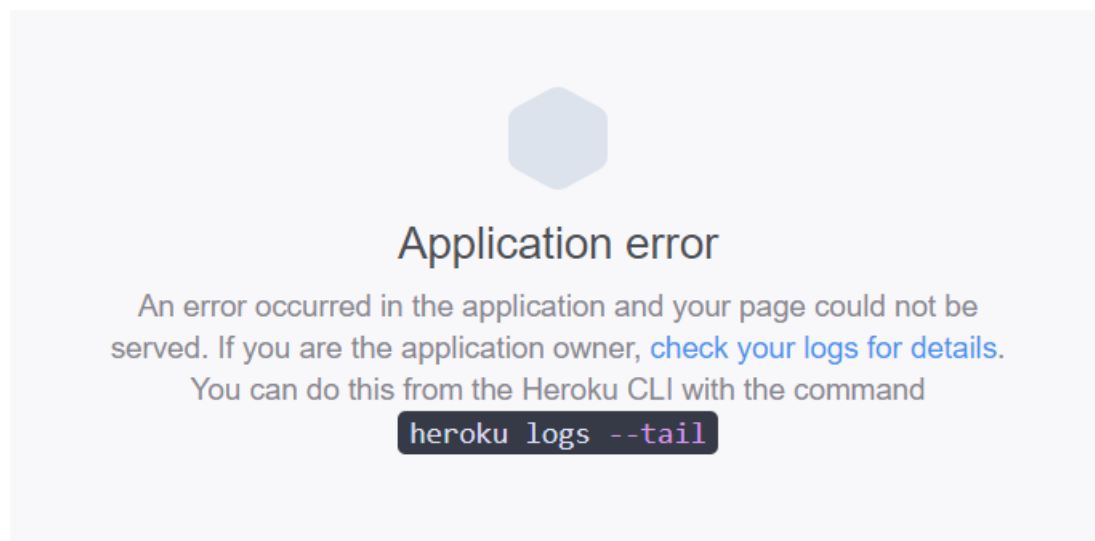
HT-ICT@B-37059 MINGW64 ~/workspace/cloud_api (master)
$ git push heroku master
Enumerating objects: 16, done.
```

(At first I got an error saying: **ERROR:** Could not find a version that satisfies the requirement numpy==1.20.1 (from -r /tmp/build\_b9845bda/requirements.txt (line 12)).

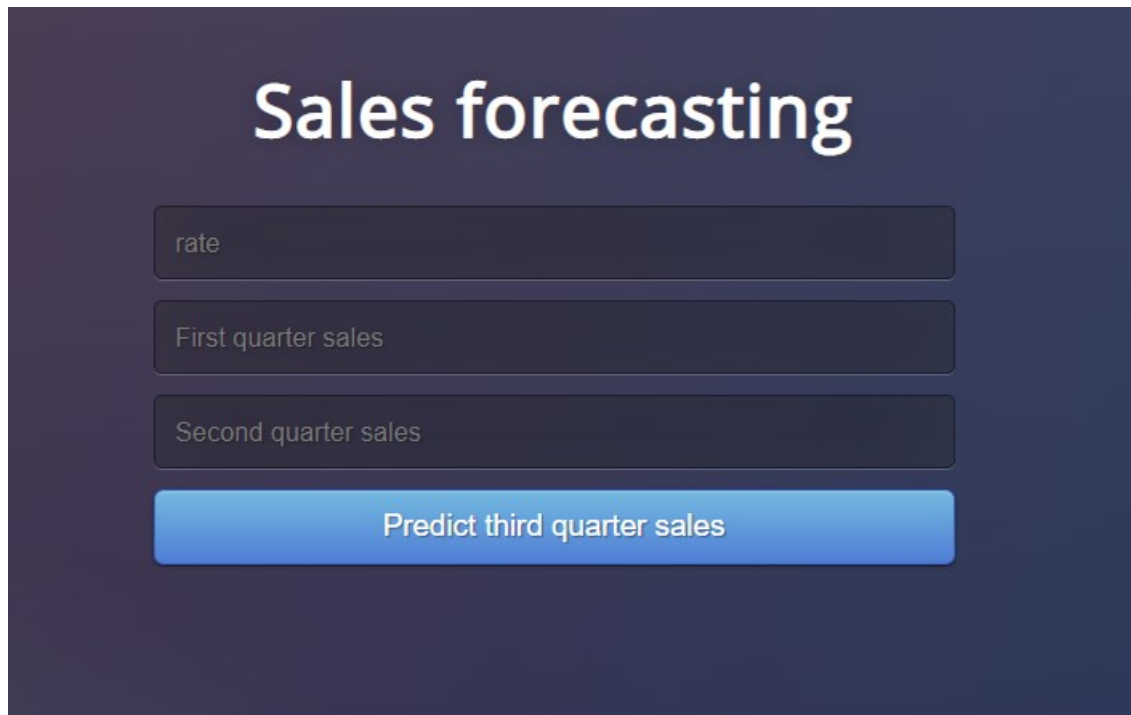
So I added a runtime.txt file containing a version that is on the list of supported runtimes and that is supported by my version of numpy, and that is python-3.9.0. After that, I ran every command starting from pip freeze > requirements.txt, and I solved the error so I got:

```
remote: ----> Discovering process types
remote:      Procfile declares types -> web
remote:
remote: ----> Compressing...
remote:      Done: 126M
remote: ----> Launching...
remote:      Released v3
remote:      https://projectweek5.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/projectweek5.git
 * [new branch]      master -> master
```

But, refreshing the link <https://projectweek5.herokuapp.com/> I got another error:

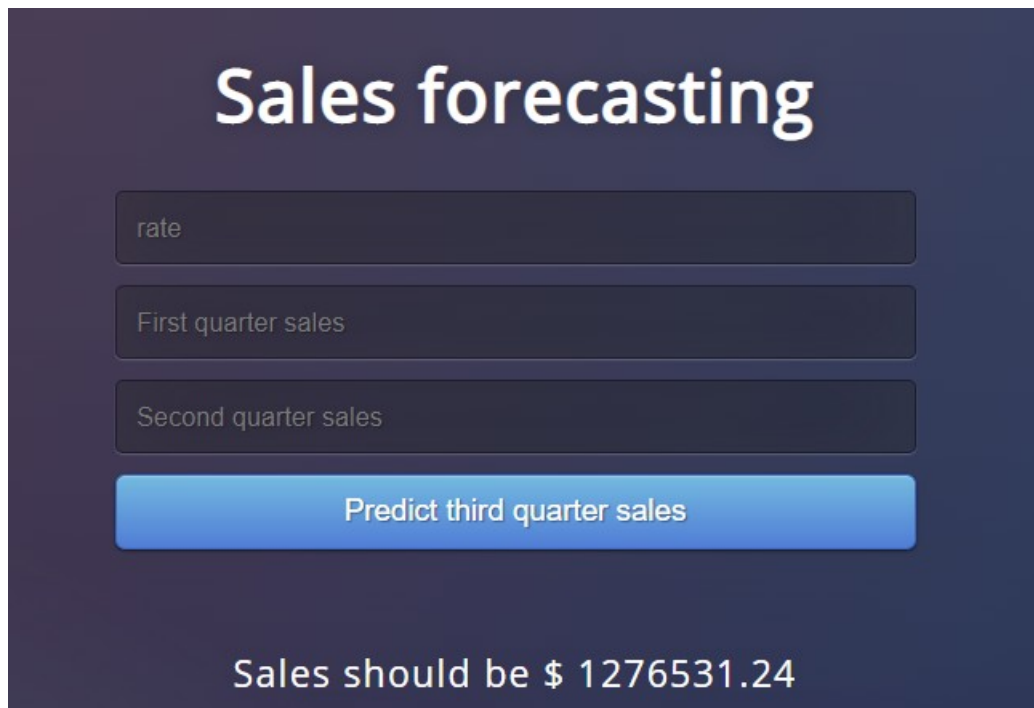


The mistake was in the Procfile, I had extra space, so I changed web : gunicorn app:app, to web: gunicorn app:app. Then I ran all the commands again starting from pip freeze > requirements.txt. Finally, I got the expected result under the link <https://projectweek5.herokuapp.com/>



A web form titled "Sales forecasting" on a dark blue background. It contains three input fields with placeholder text: "rate", "First quarter sales", and "Second quarter sales". Below these fields is a blue button with the text "Predict third quarter sales".

Furthermore, under the link <https://projectweek5.herokuapp.com/predict> I got:



The same "Sales forecasting" form as above, but with the prediction result displayed at the bottom: "Sales should be \$ 1276531.24".