

# Model Deployment using Heroku

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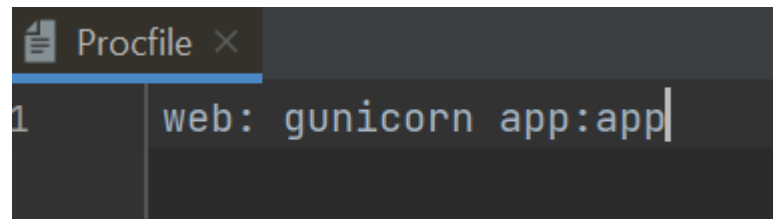
I am using the same data from week 4 assignment.  
To recap, I used Linear Regression to predict the salary of an employee based on their experience, age and their interview score. Now I will be deploying my model on Heroku.

1. First installed gunicorn:

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ pip install gunicorn
```

2. Created Procfile and added this line of code to it:

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ touch Procfile
```

A screenshot of a code editor window titled 'Procfile'. The editor shows a single line of code: 'web: gunicorn app:app'. The line is numbered '1' on the left margin.

```
1 web: gunicorn app:app
```

3. Create a requirement.txt file, which shows all the python packages needed for the project

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ pip freeze > requirments.txt
```

```
Flask==1.1.1
gunicorn==19.9.0
itsdangerous==1.1.0
Jinja2==2.10.1
MarkupSafe==1.1.1
Werkzeug==0.15.5
numpy>=1.9.2
scipy>=0.15.1
scikit-learn>=0.18
matplotlib>=1.4.3
pandas>=0.19
```

4. Created a git repo and adding the files to it

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ git init
Initialized empty Git repository in C:/Users/HP/Desktop/Desktop/salary-prediction/.git/

HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ git add .
warning: LF will be replaced by CRLF in app.py.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in model.py.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in request.py.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in templates/index.html.
The file will have its original line endings in your working directory
```

5. Committing

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ git commit -am 'init commit'
[master (root-commit) 7d2ed0b] init commit
7 files changed, 120 insertions(+)
create mode 100644 Procfile
create mode 100644 app.py
create mode 100644 model.pkl
create mode 100644 model.py
create mode 100644 request.py
create mode 100644 requirements.txt
create mode 100644 templates/index.html
```

# Heroku:

1. Login to Heroku

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ heroku login
heroku: Press any key to open up the browser to login or q to exit: h
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/36f6fc80
8?requestor=SFMyNTY.g2gDbQAAAA0zMS4xNjYuMTQzLjY1bgYA6ATGhXoBYgABUYA.GCPh
rpIcuix19CMg
heroku: Waiting for login...
Logging in... done
Logged in as bush.eisa9@gmail.com
|
```

2. Created a Heroku app and renaming it to *salarypredictionsboshraeisa*

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ heroku create
Creating app... done, sleepy-basin-94639
https://sleepy-basin-94639.herokuapp.com/ | https://git.heroku.com/sleepy-basin-94639.git

HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ heroku rename salarypredictions
Renaming sleepy-basin-94639 to salarypredictions... !
! Name salarypredictions is already taken

HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ heroku rename salarypredictionsboshraeisa
Renaming sleepy-basin-94639 to salarypredictionsboshraeisa... done
https://salarypredictionsboshraeisa.herokuapp.com/ | https://git.heroku.com/salaryprediction
eisa.git
! Don't forget to update git remotes for all other local checkouts of the
! app.
Git remote heroku updated
```

3. Last step, is to push it to Heroku

```
HP@Bushras MINGW64 ~/Desktop/Desktop/salary-prediction (master)
$ git push heroku master
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (10/10), 2.64 KiB | 900.00 KiB/s, done.
Total 10 (delta 0), reused 0 (delta 0), pack-reused 0
remote: Compressing source files... done.
remote: Building source:
remote:
remote: ----> Building on the Heroku-20 stack
remote: ----> Determining which buildpack to use for this app
remote: ----> Python app detected
remote: ----> No Python version was specified. Using the buildpack default: python-
remote: To use a different version, see: https://devcenter.heroku.com/articles
es
remote: ----> Installing python-3.9.6
remote: ----> Installing pip 20.2.4, setuptools 47.1.1 and wheel 0.36.2
remote: ----> Installing SQLite3
remote: ----> Installing requirements with pip
remote: Collecting Flask==1.1.1
remote: Downloading Flask-1.1.1-py2.py3-none-any.whl (94 kB)
remote: Collecting gunicorn==19.9.0
remote: Downloading gunicorn-19.9.0-py2.py3-none-any.whl (112 kB)
remote: Collecting itsdangerous==1.1.0
```

As shown below, the deployment is complete.

```
remote: ----> Launching...
remote:      Released v3
remote:      https://salarypredictionsboshraeisa.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/salarypredictionsboshraeisa.git
 * [new branch]      master -> master
```