

Model Deployment - Heroku

Name: Model Deployment - Heroku

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Batch: LISUM05

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Data intake reviewer: N/A

Data storage location: <https://github.com/ahnoamu/ML-Deployment-Heroku/>

STEPS FOLLOWED FOR DEPLOYING MACHINE LEARNING MODEL THAT PREDICTS VIDEO GAME SALES

1. **Generate model:** Generated regression model based on video game sales data (vgsales.csv), serialized, and saved as a pickle file reg_model.pkl.
2. **Generate prediction_app.py:** prediction_app.py contains flask API endpoints which request and receive video game input data through the user interface (GUI), calculates the predicted Global sale value based on the regression model (reg_model.py), and returns the predicted value.
3. **Generate index.html:** This is a HTML file containing the structure of the web page. The file points to a web styling file (static/style.css) and company logo (images/Original.svg). The file creates a web interface used to prompt and obtain user input, then displays the predicted sale to the user when the submit button is clicked.
4. **Create templates directory:** Moved the index.html to this directory. Flask will identify the html file in this directory.
5. **Create static directory:** Contains subdirectories /css, with style.css file for web styling, and /images with company logo vector file Original.svg for display on the web.
6. **Create requirements.txt:** Contains all liability names (modules/libraries) and associated versions, that will be required to run the web application.
7. **Create Procfile:** The Procfile is used by Heroku to initiate processes/commands that are executed by the web application on startup.
8. **Create a repository on GitHub (ML-Deployment-Heroku), upload the files.**
9. **Create a Heroku user account, create a new app, and link it to the online GitHub repository.**
10. **Deploy the model:** The model can be deployed automatically or manually on Heroku.

Snapshots

N/B:

Heroku was hit by a cyber security breach at the time the model was being deployed. Its seamless link and authentication keys to GitHub repositories were disabled, therefore deployment snapshots are unavailable.

Reference:

<https://status.heroku.com/incidents/2413>

<https://github.blog/2022-04-15-security-alert-stolen-oauth-user-tokens/>