

Configuration Manual

MSc Research Project
MSc AI for Business

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Section 1 - Hardware and software requirements.

In this section suggested hardware and software requirements are listed for StockSense Streamlit app deployment. Please note that other versions of the hardware or software provided may have implications.

Hardware Overview:

Model Name:	MacBook Air
Model Identifier:	Mac15,13
Model Number:	MRYQ3LL/A
Chip:	Apple M3
Total Number of Cores:	8 (4 performance and 4 efficiency)
Memory:	8 GB
System Firmware Version:	11881.121.1
OS Loader Version:	11881.121.1
Serial Number (system):	FL4RNX3DXK
Hardware UUID:	BDA43204-193F-58ED-9ADC-E1CC048DE908
Provisioning UDID:	00008122-000E69A21ADA001C
Activation Lock Status:	Enabled

Figure 1: Computer suggested requirements.

iOS Version	18.6 >
Model Name	iPhone 16 Pro
Capacity	256 GB

Figure 2: Smartphone suggested requirements.

Section 2 – Pre-preparation for the execution environment.

Instructions are providing to set up the environment in your computer and smartphone to run the Streamlit app with all the dependencies and requirements.

2.1 Install Camo Camera in the iPhone and Mac.



Figure 3: Camo Camera app in App Store.

- 2.2 Select your desired camera in Camo Camera for detection (preferable your smartphone camera).
- 2.3 Download and unzip project StockSense from Moodle (StockSense Final Version.zip) in your computer.

Section 3 – Preparation of the execution environment.

- 3.1 Open terminal on your computer (command + space bar) and type “terminal”.
- 3.2 Install Python version 3.12.4 to be able to run the code on your computer, this version supports the libraries needed.

```
pip install python 3.12.4
```

- 3.3 Open project on the terminal by first typing “cd” and then copying the project path on the terminal or dragging the project folder on the terminal, then click enter. Example provided below. It should have your path.

```
(base) danacarranza@MacBook-Air-de-Dana ~ % cd /Users/danacarranza/Desktop/Stock_Sense\ \((Final\ Version\)  
(base) danacarranza@MacBook-Air-de-Dana Stock_Sense (Final Version) % █
```

Figure 4: Open project in terminal example.

- 3.4 Type “ls” to confirm that you’re in the correct path and have the files.

```
[(base) danacarranza@MacBook-Air-de-Dana ~ % cd /Users/danacarranza/Desktop/Stock_Sense\ \((Final\ Version\)  
[(base) danacarranza@MacBook-Air-de-Dana Stock_Sense (Final Version) % ls  
app.py                last_frame.jpg  
best.pt               project_structure.txt  
counts.json           quick_eval  
data                  requirements.txt  
detect_and_count.py  timestamp.txt  
generate_llm_recommendation.py yoloV8n.pt  
inventory_history.csv  
(base) danacarranza@MacBook-Air-de-Dana Stock_Sense (Final Version) % █
```

Figure 5: Example of confirmation of correct path and files.

- 3.5 Set up the libraries and dependencies required by installing “requirements.txt” file. This file contains all the necessary libraries required to run this project.

```
pip install -r requirements.txt
```

```

site-packages (from gitdb<5,>=4.0.1->gitpython!=3.1.19,<4,>=3.0.7->streamlit->-r
requirements.txt (line 1)) (4.0.0)
Requirement already satisfied: MarkupSafe>=2.0 in /opt/anaconda3/lib/python3.12/
site-packages (from Jinja2->altair<6,>=4.0->streamlit->-r requirements.txt (line
1)) (2.1.3)
Requirement already satisfied: attrs>=22.2.0 in /opt/anaconda3/lib/python3.12/si
te-packages (from jsonschema>=3.0->altair<6,>=4.0->streamlit->-r requirements.tx
t (line 1)) (23.1.0)
Requirement already satisfied: jsonschema-specifications>=2023.03.6 in /opt/anac
onda3/lib/python3.12/site-packages (from jsonschema>=3.0->altair<6,>=4.0->stream
lit->-r requirements.txt (line 1)) (2023.7.1)
Requirement already satisfied: referencing>=0.28.4 in /opt/anaconda3/lib/python3
.12/site-packages (from jsonschema>=3.0->altair<6,>=4.0->streamlit->-r requireme
nts.txt (line 1)) (0.30.2)
Requirement already satisfied: rpds-py>=0.7.1 in /opt/anaconda3/lib/python3.12/s
ite-packages (from jsonschema>=3.0->altair<6,>=4.0->streamlit->-r requirements.t
xt (line 1)) (0.10.6)
Requirement already satisfied: mdurl=>0.1 in /opt/anaconda3/lib/python3.12/site-
packages (from markdown-it-py<3.0.0,>=2.2.0->rich<14,>=10.14.0->streamlit->-r re
quirements.txt (line 1)) (0.1.0)
Requirement already satisfied: mpmath<1.4,>=1.1.0 in /opt/anaconda3/lib/python3.
12/site-packages (from sympy>=1.13.3->torch>=1.8.0->ultralytics->-r requirements
.txt (line 2)) (1.3.0)
(base) danacarranza@MacBook-Air-de-Dana Stock Sense (Final Version) % █

```

Figure 6: Example of the libraries installed successfully.

Section 4 – Interface deployment.

4.1 Once confirmed that you have all the libraries installed, just type “streamlit run app.py” to deploy the interface in local host.

```
streamlit run app.py
```

4.2 This message should appear in your terminal.

```

(base) danacarranza@MacBook-Air-de-Dana Stock_Sense (Final Version) % streamlit run app.py

You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501
Network URL: http://192.168.0.229:8501

```

Figure 7: Streamlit run confirmation example.

4.3 Streamlit should automatically open on your computer as local host. At the same time the camo camera will open on your smartphone or computer (you choose) to start detecting objects in real time. Please remember to be accept permissions to open camera, also be connected to internet during the process.

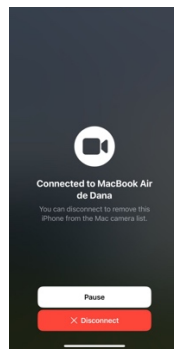


Figure 8: iPhone Camo Camera open (frame displayed in Streamlit).

4.4 Streamlit should be already opened in your computer as local host.

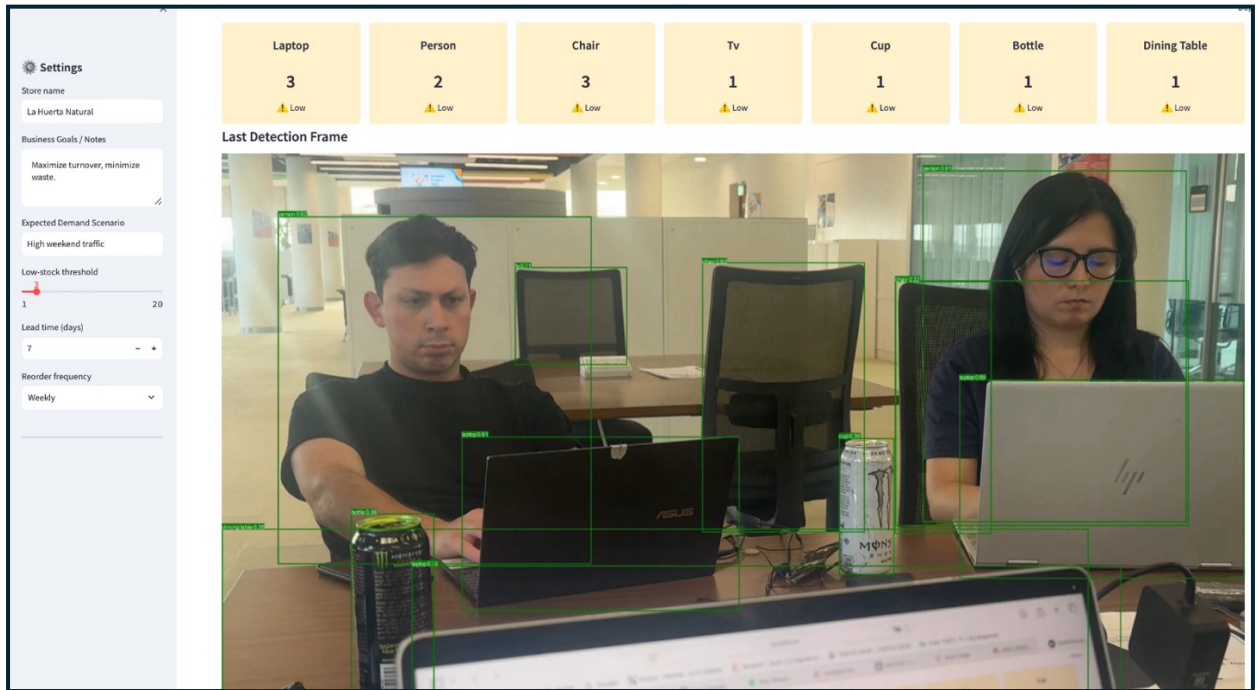


Figure 8: Streamlit (inventory tab) interface deployed.