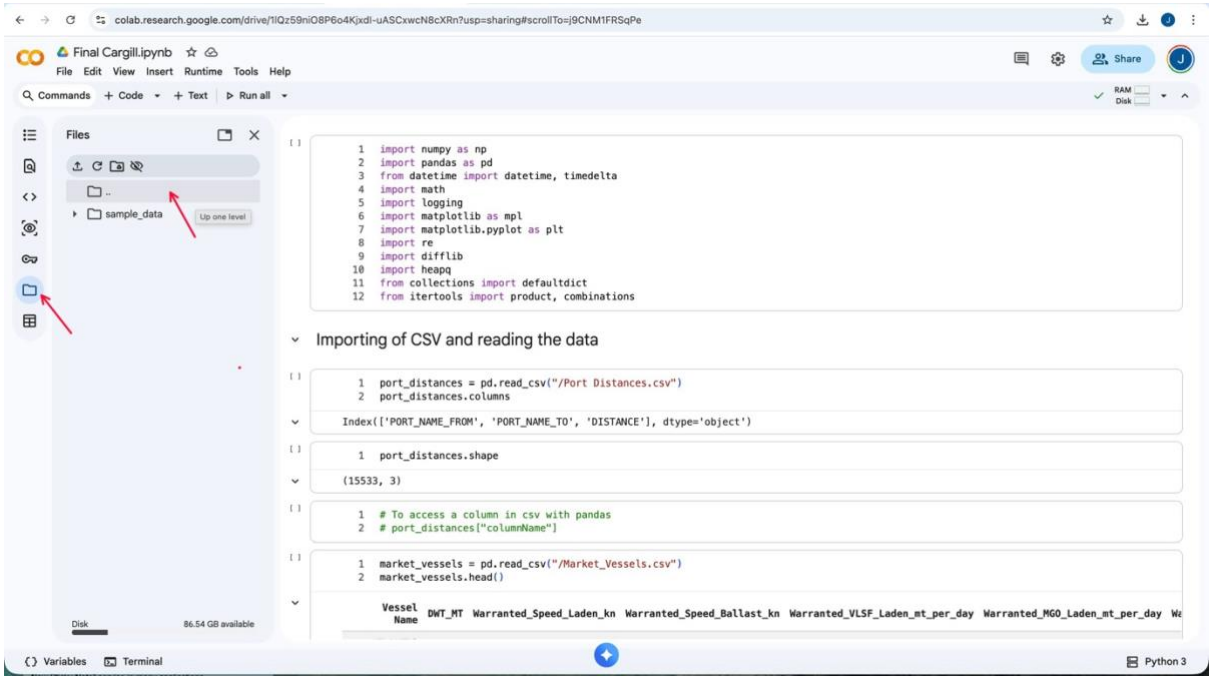
File Structure

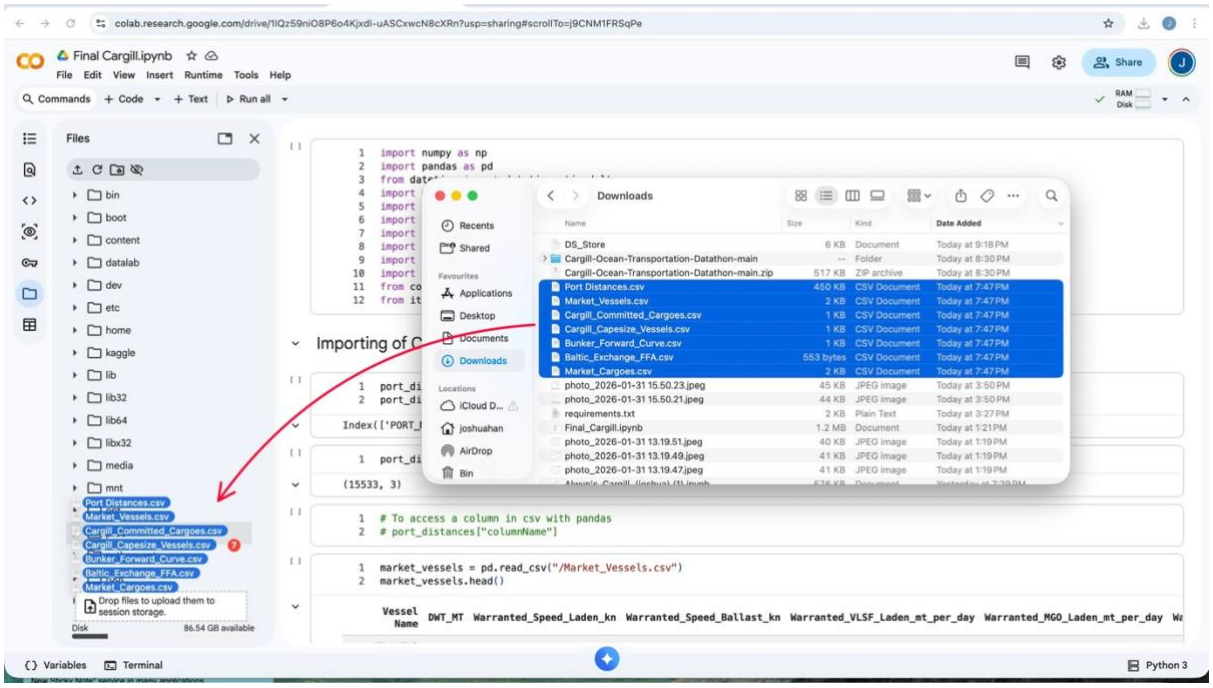
Our repository contains:

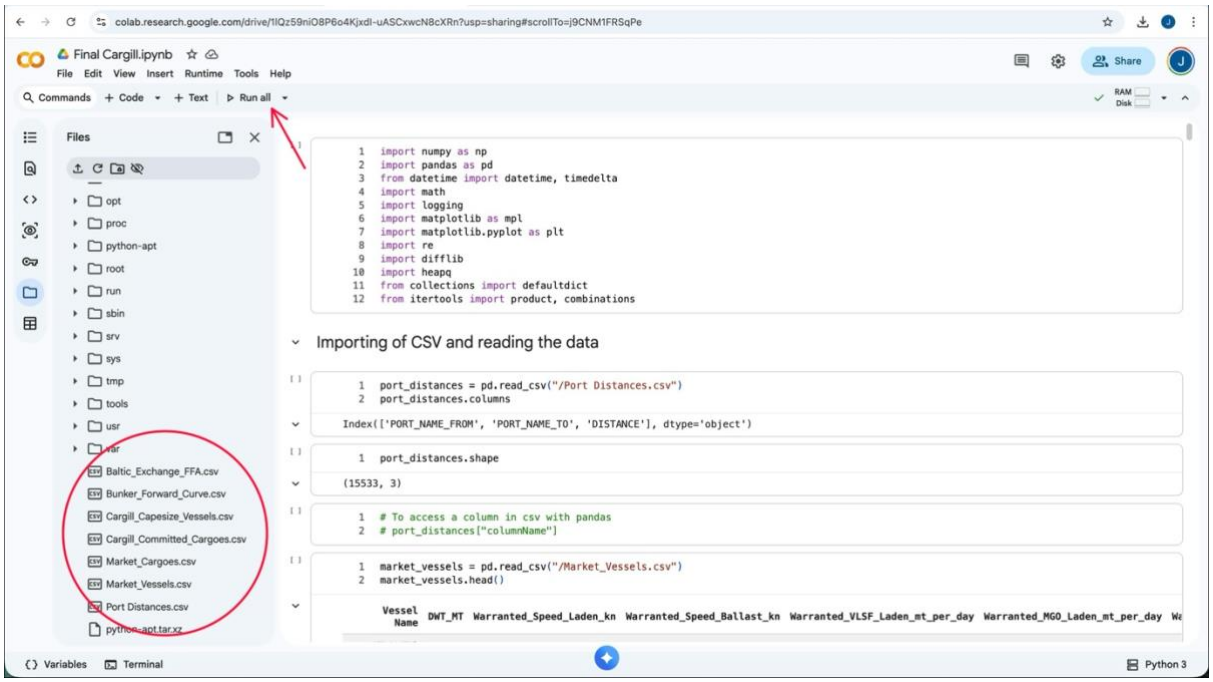
- A folder with seven csv files we used in our code
- Our Jupyter notebook
- Voyage Recommendation Report
- README file
- Instructions to reproduce results
- requirements.txt

Instructions to reproduce results

1. Download the 7 csv files and the Jupyter notebook in the zipped repository.
2. Open the Jupyter notebook in Google Colab
3. Click on the file section as shown in the picture and click on the "…" part above sample_data
4. Drag the 7 csv files into the part which we arrowed to upload the csv files
5. Check that the csv files are uploaded and hit "Run all"




colab.research.google.com/drive/1lQz59niO8P6o4KjxdI-uASCxwcN8cXRn?usp=sharing#scrollTo=j9CNM1FRSqPe
Final Cargill.ipynb
File Edit View Insert Runtime Tools Help
Share
Commands + Code + Text Run all
Files
bin
boot
content
datalab
dev
etc
home
kaggle
lib
lib32
lib64
libx32
media
mnt
Port Distances.csv
Market_Vessels.csv
Cargill_Committed_Cargoes.csv
Cargill_Capesize_Vessels.csv
Bunker_Forward_Curve.csv
Baltic_Exchange_FFA.csv
Market_Cargoes.csv
Drop files to upload them to session storage.
Disk 86.54 GB available
Downloads
Recents
Shared
Applications
Desktop
Documents
Downloads
iCloud D...
joshuahan
AirDrop
Bin
DS_Store 6 KB Document Today at 9:18 PM
Cargill-Ocean-Transportation-Datathon-main -- Folder Today at 8:30 PM
Cargill-Ocean-Transportation-Datathon-main.zip 517 KB ZIP archive Today at 8:30 PM
Port Distances.csv 450 KB CSV Document Today at 7:47 PM
Market_Vessels.csv 2 KB CSV Document Today at 7:47 PM
Cargill_Committed_Cargoes.csv 1 KB CSV Document Today at 7:47 PM
Cargill_Capesize_Vessels.csv 1 KB CSV Document Today at 7:47 PM
Bunker_Forward_Curve.csv 1 KB CSV Document Today at 7:47 PM
Baltic_Exchange_FFA.csv 553 bytes CSV Document Today at 7:47 PM
Market_Cargoes.csv 2 KB CSV Document Today at 7:47 PM
photo_2026-01-31 15.50.23.jpeg 45 KB JPEG image Today at 3:50 PM
photo_2026-01-31 15.50.21.jpeg 44 KB JPEG image Today at 3:50 PM
requirements.txt 2 KB Plain Text Today at 3:27 PM
Final_Cargill.ipynb 1.2 MB Document Today at 1:21 PM
photo_2026-01-31 13.19.51.jpeg 40 KB JPEG image Today at 1:19 PM
photo_2026-01-31 13.19.49.jpeg 41 KB JPEG image Today at 1:19 PM
photo_2026-01-31 13.19.47.jpeg 41 KB JPEG image Today at 1:19 PM
import numpy as np
import pandas as pd
Importing of C
port_di
port_di
Index(['PORT_
(15533, 3)
# To access a column in csv with pandas
# port_distances["columnName"]
market_vessels = pd.read_csv("/Market_Vessels.csv")
market_vessels.head()
Vessel Name DWT_MT Warranted_Speed_Laden_kn Warranted_Speed_Ballast_kn Warranted_VLSF_Laden_mt_per_day Warranted_MGO_Laden_mt_per_day
Variables Terminal
Python 3


colab.research.google.com/drive/1lQz59niO8P6o4KjxdI-uASCxwcN8cXRn?usp=sharing#scrollTo=j9CNM1FRSqPe
Final Cargill.ipynb
File Edit View Insert Runtime Tools Help
Share
Commands + Code + Text Run all
Files
opt
proc
python-apt
root
run
sbin
srv
sys
tmp
tools
usr
var
Baltic_Exchange_FFA.csv
Bunker_Forward_Curve.csv
Cargill_Capesize_Vessels.csv
Cargill_Committed_Cargoes.csv
Market_Cargoes.csv
Market_Vessels.csv
Port Distances.csv
python-apt.tar.xz
import numpy as np
import pandas as pd
from datetime import datetime, timedelta
import math
import logging
import matplotlib as mpl
import matplotlib.pyplot as plt
import re
import difflib
import heapq
from collections import defaultdict
from itertools import product, combinations
Importing of CSV and reading the data
port_distances = pd.read_csv("/Port Distances.csv")
port_distances.columns
Index(['PORT_NAME_FROM', 'PORT_NAME_TO', 'DISTANCE'], dtype='object')
port_distances.shape
(15533, 3)
# To access a column in csv with pandas
# port_distances["columnName"]
market_vessels = pd.read_csv("/Market_Vessels.csv")
market_vessels.head()
Vessel Name DWT_MT Warranted_Speed_Laden_kn Warranted_Speed_Ballast_kn Warranted_VLSF_Laden_mt_per_day Warranted_MGO_Laden_mt_per_day
Variables Terminal
Python 3

Team members and Responsibilities

Four Musketeers

Members	Role	Responsibility
Alwyn Hay	Group Leader Project Manager Programmer	• Delegated different roles to various group members • Generated the majority of the code • Generated the AI chatbot and user interface
Joshua Han	Vice-Programmer	• Helped Alwyn troubleshoot and rectify faulty code • Compiled all of the code and created the repository
Nie Junyang	Main Researcher	• Researched on the logistics and operations of Cargill and the maritime industry • Helped Yikun with the report
Wang Yikun	Vice-researcher Auditor	• Wrote the main bulk of the report • Double-checked the code written by Joshua and Alwyn to ensure accuracy