



PORT OPERATIONS ANALYSIS

Operation analysis project for enhancing organizational efficiency.

Start Presentation





Subject

Company

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Team work



SCRUM



Stela Lúcio

PO



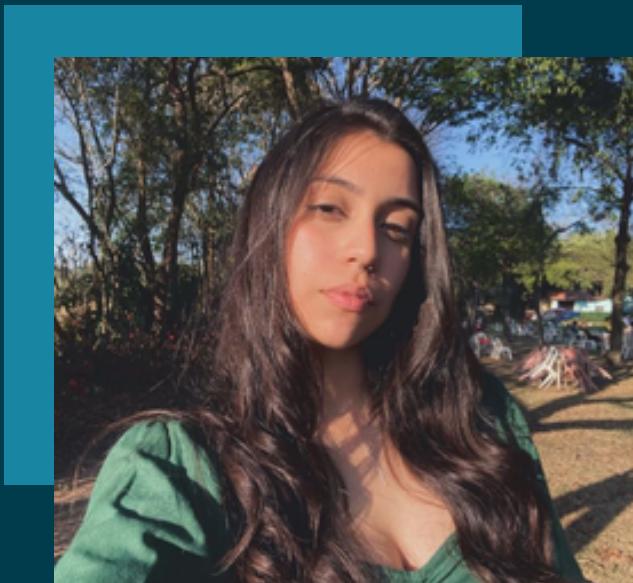
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Tatiane





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Introduction

This project analyzes port data from 2020 to 2024, focusing on logistical efficiency. It aims to identify causes of operational stoppages, measure cargo flows, highlight key trading countries, and classify cargo types.

Additionally, it compares ports using DEA methodology to find the most efficient ones, providing insights to improve port operations.



User Story

ID	User Story	Prioridade	Partner Requirement
US1	As an analyst, I will collect and filter data from 2020 to 2024 to ensure the information is ready for future analysis	High	5
US2	As an analyst, I will develop a draft of the home screen with key indicators to have a clear and objective view of what the final Dashboard version will look like	Medium	1
US3	As an analyst, I will select specific products for deep data analysis	Low	1
US4	As an analyst, I will develop a Python code to unify the data that will be used for data analysis	High	5

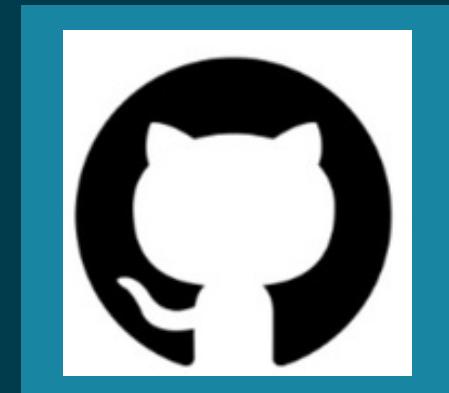


Sprint 1

In this first sprint, we established the project foundation by defining the scope, organizing tasks, and setting up key tools and processes to guide future development.

Key activities performed:

- Created User Stories outlining the project plan and requirements
- Conducted an initial data analysis to understand the dataset and its challenges
- Set up the project repository on GitHub for version control and collaboration
- Established communication channels and workflow among team members



README



Who we are?

"Connecting the World!"

Welcome ESPHERA LOGTECH, where we connect the world with intelligent and agile logistics solutions. Our mission as a group of students is to integrate technology and planning to efficiently and safely meet the needs of each client. With an innovative approach, we transform the routing sector, driving global mobility with precision and excellence.



Index



Available data

2020 à 2024

```
[7] 2s
▶ cargas_anos = pd.concat([carga2021,carga2022,carga2023,carga2024], ignore_index=True)
cargas_anos.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 9267261 entries, 0 to 9267260
Data columns (total 30 columns):
 #   Column           Dtype  
 --- 
 0   IDCarga          int64  
 1   IDAtracacao      int64  
 2   Origem            object  
 3   Destino           object  
 4   CDMercadoria     object  
 5   Tipo Operação da Carga  object  
 6   Carga Geral Acondicionamento  object  
 7   ConteinerEstado   object  
 8   Tipo Navegação    object  
 9   FlagAutorizacao  object  
 10  FlagCabotagem    float64 
 11  FlagCabotagemMovimentacao  float64 
 12  FlagConteinerTamanho  object  
 13  FlagLongoCurso   float64 
 14  FlagMCOOperacaoCarga  int64  
 15  FlagOffshore     float64 
 16  FlagTransporteViaInterior  int64  
 17  Percurso Transporte em vias Interiores  object  
 18  Percurso Transporte Interiores   object  
 19  STNaturezaCarga  object  
 20  STSH2             object  
 21  STSH4             object  
 22  Natureza da Carga object  
 23  Sentido            object  
 24  TEU               object  
 25  QTCargo           int64  
 26  VLPesoCargaBruta object  
 27  Mercadoria         object  
 28  País Destino       object  
 29  País Origem        object  
dtypes: float64(4), int64(5), object(21)
memory usage: 2.1+ GB
```

```
[1] ✓ 0s import pandas as pd
[2] ✓ 0s from google.colab import drive
[3] ✓ 1s drive.mount('/content/drive')
→ Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
[4] ✓ 0s origem = ('/content/drive/My Drive/APIDADOS/cargas/')
[5] ✓ 0s carga2021 = origem + 'cargasunificado_2021'
carga2022 = origem + 'cargasunificado_2022'
carga2023 = origem + 'cargasunificado_2023'
carga2024 = origem + 'cargasunificado_2024'
[6] ✓ 1min carga2021 = pd.read_csv (carga2021,low_memory=False, sep=',', encoding='UTF-8')
carga2022 = pd.read_csv (carga2022,low_memory=False, sep=',', encoding='UTF-8')
carga2023 = pd.read_csv (carga2023,low_memory=False, sep=',', encoding='UTF-8')
carga2024 = pd.read_csv (carga2024,low_memory=False, sep=',', encoding='UTF-8')
```

Selected materials

- Sugars
- Vehicles
- Rolled Products
- Mail Orders
- Fertilizers





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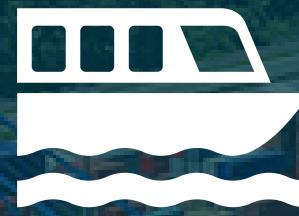
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THANK YOU



We appreciate everyone's attention and contribution.

