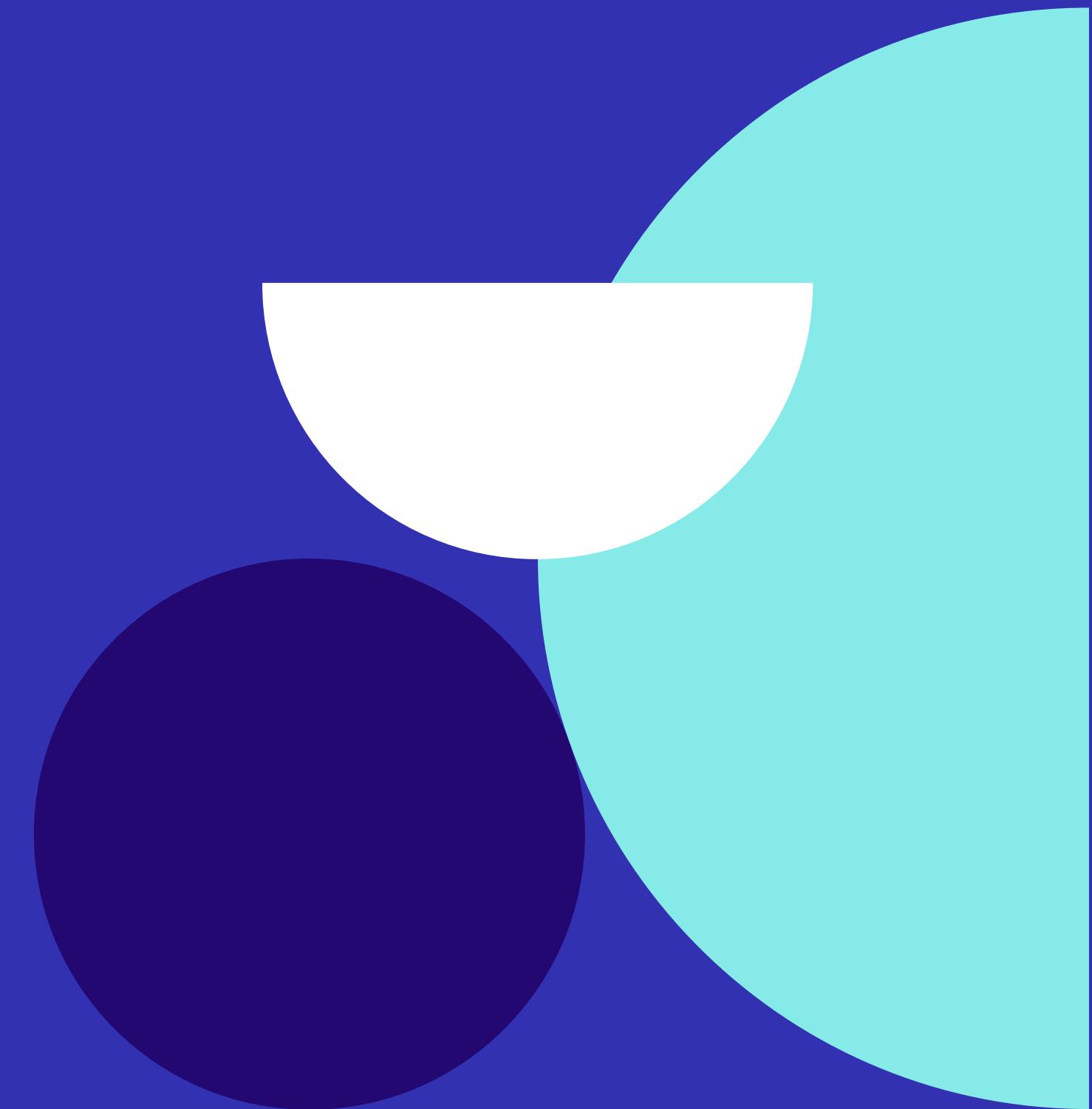


PROJECT 5

Patient Survival

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A photograph of a young woman with long brown hair tied back, wearing a light blue surgical mask and a clear plastic face shield. She is looking directly at the camera with a neutral expression. The background is a plain, light-colored wall.

Data overview

Handling large set of hospital data

- In-hospital mortality for admitted patients
- 85 columns
- More than 90k rows
- Technical terms

Data Description

Sets of data :

In order for us to better understand the data we are handling, we decided to split it into categories that fall in the same use case.

- Patient identity
- Disease
- Intensive care unit info
- APACHE admission diagnosis
- The first hour of patient stay measures
- First 24 hours of patient stay measures
- Probabilistic prediction of mortality
- Hospital death



Challenges

Roll-out of Faced Challenges



PREPARATORY STAGE

This project required a lot of **planning and organization** before tackling the tasks. It challenged our **time management skills**,



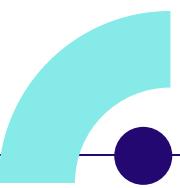
STAGE 1

Understand the **dataset vocabulary** (ICU, BMI, Apache...)



STAGE 2

Defining the **KPIs** from the **80+** indicators



STAGE 3

Setting the plots in **Streamlit / filters**

Process

CLEANING DATA

- Looking for outliers
- Scanning empty rows
- Dropping empty columns
- Looking for correlations
- General descriptive analysis



SETS OF DATA

- Splitting the data into three groups depending on our KPI's:
- Filtering by gender
 - Filtering by ethnicity
 - Filtering by admissions



PLOTTING

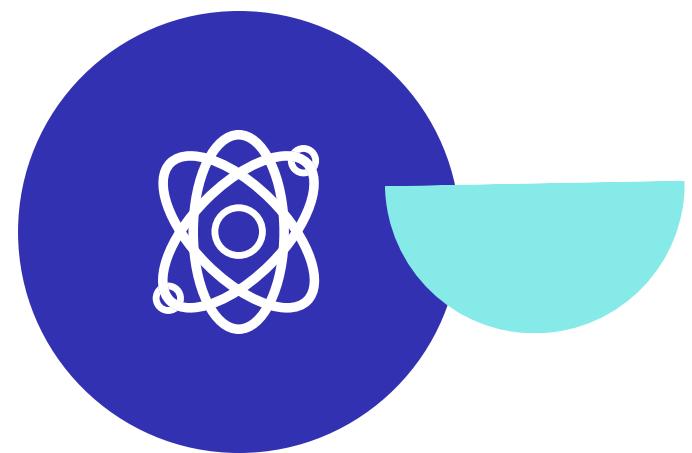
- Working on Jupiter
- Plotting on Matplotlib, Altair, Plotly, Vega-lite, Streamlit
- Running on streaamlit
- Making adjustments
- Reviewing aesthetics



Three sets of data



Patient general information



ICU admission (Diseases)



Death statistics



What We've Done Right

- Data handling
- Time management
- Team work

What We Can Improve

Develop and validate a prediction model for all-cause in-hospital mortality among admitted patients



Highlights



BMI

Body mass Indic show that the majority of patients are obese



Disease

- More than a third of admitted patient doesn't have a history disease (**72%**) but when they do, **diabetes mellitus** count for **80%**



Admission diagnosis

Top admission diagnoses are related to **cardiovascular 33%**, **Neurological 13%**



Source of Admission

The majority of admission comes from **Accident & emergency 59%**

+90k

PATIENT

37%

PATIENT AGED BTW 64-80

A photograph of a woman with long brown hair, wearing a white lab coat over an orange turtleneck. She is adjusting a light blue surgical mask with her hands. The background shows a tiled wall and some stacked white papers.

Demo

Talk to us!







