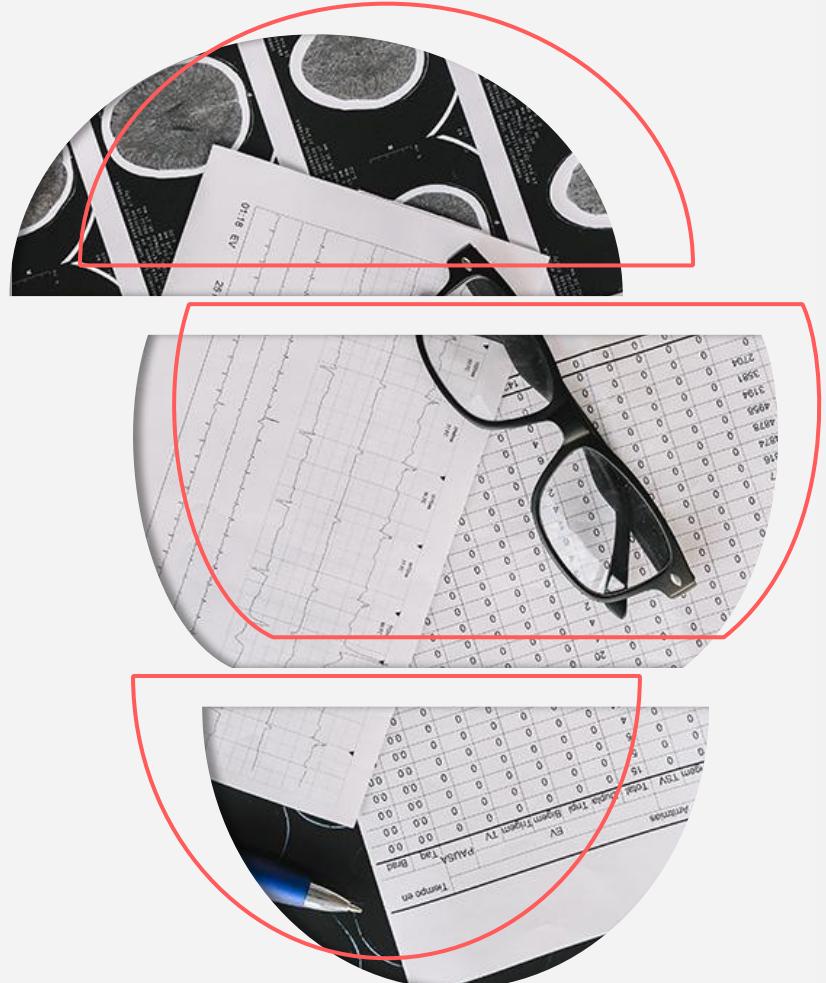




SAML

*Medical Research*

# STROKE RESEARCH





# SAML TEAM



**ANGELA  
PACATTE**

Data Analyst,  
Communications  
Director



**KELSEY  
CORCORAN**

Data Analyst,  
Machine Learning  
Engineer



**KATIE  
HOPKINS**

Data Analyst,  
Chief Marketing  
Officer



**JACK  
BAUER**

Data Analyst,  
Chief Information  
Officer



**BOWEN  
WILDER**

Data Analyst,  
Project Manager

# TABLE OF CONTENTS

01

## INTRODUCTION

- What is a Stroke?
- Symptoms of a Stroke

02

## STROKE DATA

- The Dataset
- Medical Criteria
- Personal Criteria
- EDA Findings

03

## PURPOSE

- Why choose this topic?
- Questions to Answer...

04

## ANALYSIS

- EDA Analysis Descr.  
Phase(?)
- Visualizations
- Reccomendations
- EDA Findings

05

## TOOLS

- Project Framework

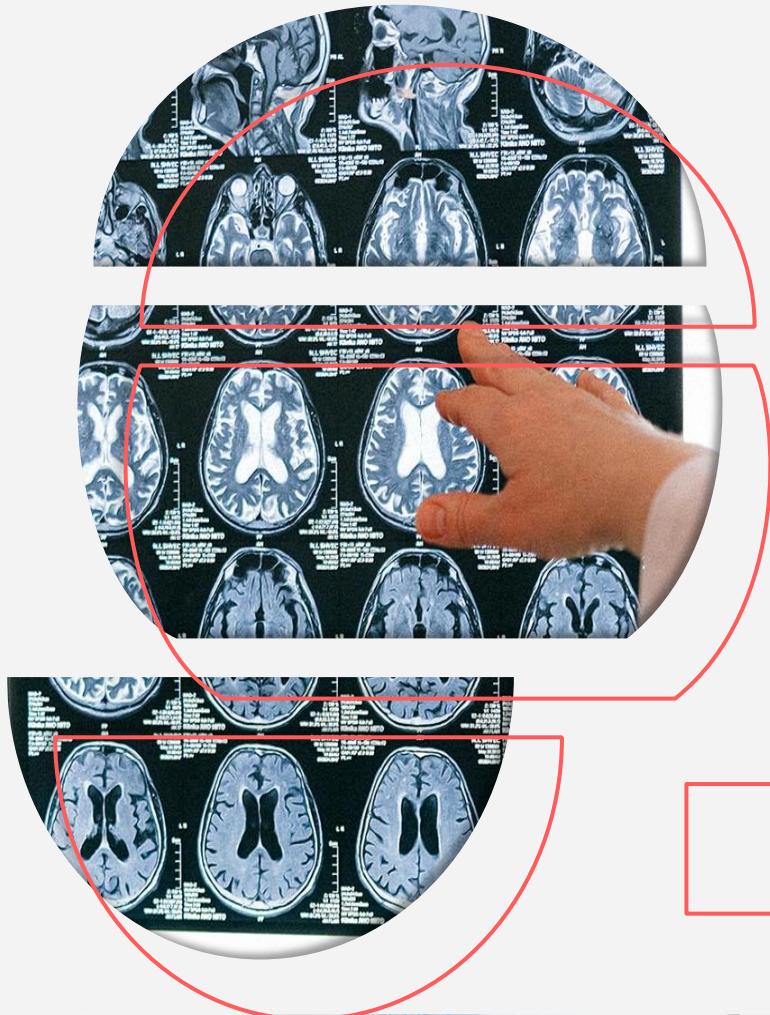
06

## CONCLUSIONS

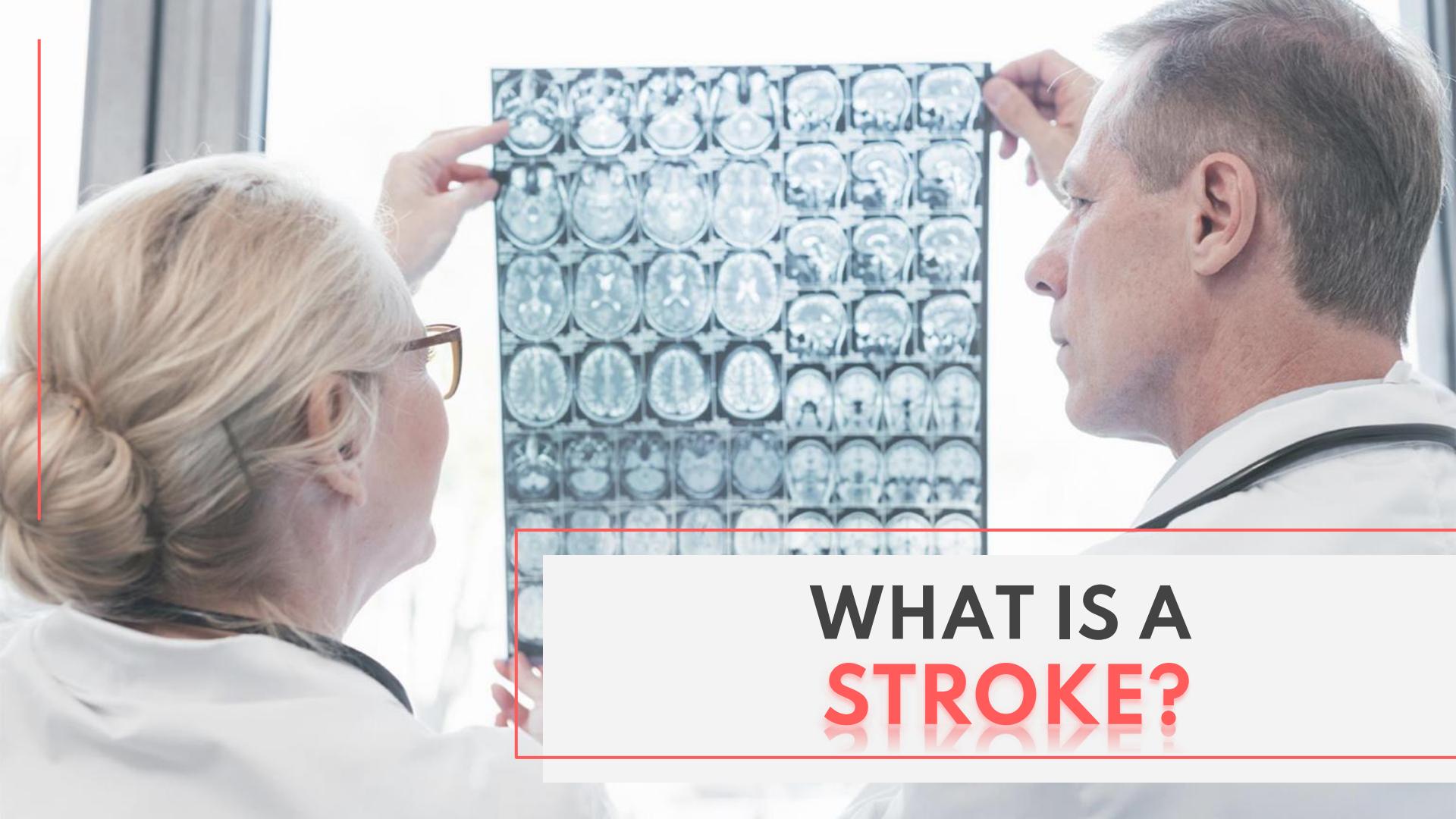
- Results
- Reccomendations
- What we would have done differently...

# 01

# INTRODUCTION



Here is where your presentation begins



# WHAT IS A **STROKE?**

---

# **ABOUT THE DISEASE...**

---



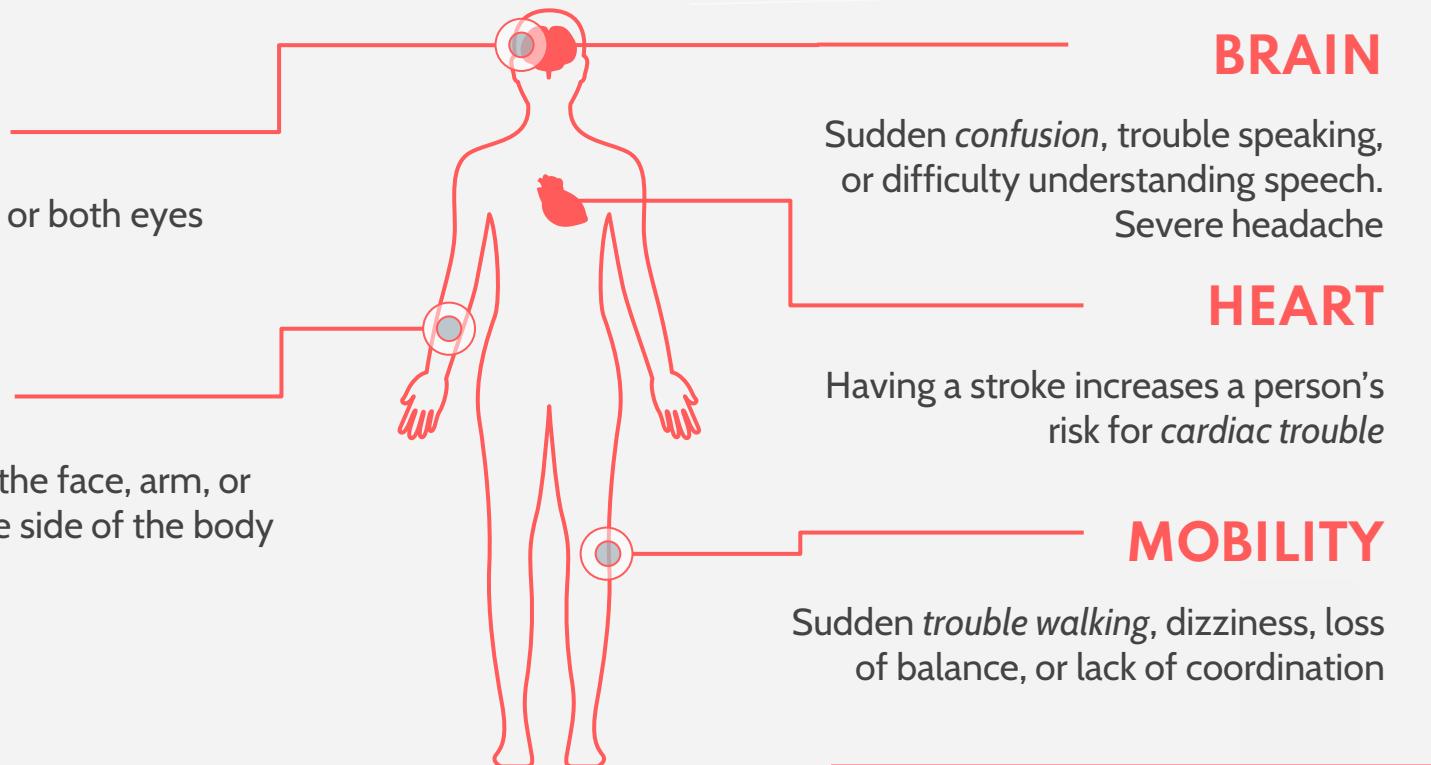
# SYMPTOMS OF A STROKE

## EYES

Trouble seeing in one or both eyes

## NUMBNESS

Sudden weakness in the face, arm, or leg, especially on one side of the body



## BRAIN

Sudden confusion, trouble speaking, or difficulty understanding speech.  
Severe headache

## HEART

Having a stroke increases a person's risk for cardiac trouble

## MOBILITY

Sudden trouble walking, dizziness, loss of balance, or lack of coordination

# 02

# STROKE DATA



# STROKE DATASET

ID#	Gender	Age	Hypertension	Heart_Dise...	Avg_Glucose_Lvl	BMI	Ever_Married	Work_Type	Residence_Type	Smoker	Stroke
	str	int	int	int	float	float	str	str	str	str	int
1	Male	67	0	1	228.69	36.6	Yes	Private	Urban	Former	1
3	Male	80	0	1	105.92	32.5	Yes	Private	Rural	Never	1
4	Female	49	0	0	171.23	34.4	Yes	Private	Urban	Current	1
5	Female	79	1	0	174.12	24.0	Yes	Self-employed	Rural	Never	1
6	Male	81	0	0	186.21	29.0	Yes	Private	Urban	Former	1
7	Male	74	1	1	70.09	27.4	Yes	Private	Rural	Never	1
8	Female	69	0	0	94.39	22.8	No	Private	Urban	Never	1
10	Female	78	0	0	58.57	24.2	Yes	Private	Urban	Unknown	1
11	Female	81	1	0	80.43	29.7	Yes	Private	Rural	Never	1
12	Female	61	0	1	120.46	36.8	Yes	Govt_job	Rural	Current	1

**Shape**  
(5,109, 12)

**Missing Values**  
201 NaNs in "BMI" column

All Criteria
Medical Criteria
Personal Criteria

# MEDICAL CRITERIA



## AGE

From birth to 82 years of age



## GENDER

Male or Female



## HYPERTENSION

Yes or No



## HEART DISEASE

Yes or No



## AVG GLUCOSE LVL

From 55 to 268



## BMI

From 10 to 98

# PERSONAL CRITERIA



## AGE

From birth to 82 years of age



## GENDER

Male or Female



## EVER MARRIED

Yes or No



## WORK TYPE

Government, Private, Self-Employed,  
& Raise Children



## RESIDENCE TYPE

Rural or Urban



## SMOKING STATUS

Current, Former, Never,  
& Unknown

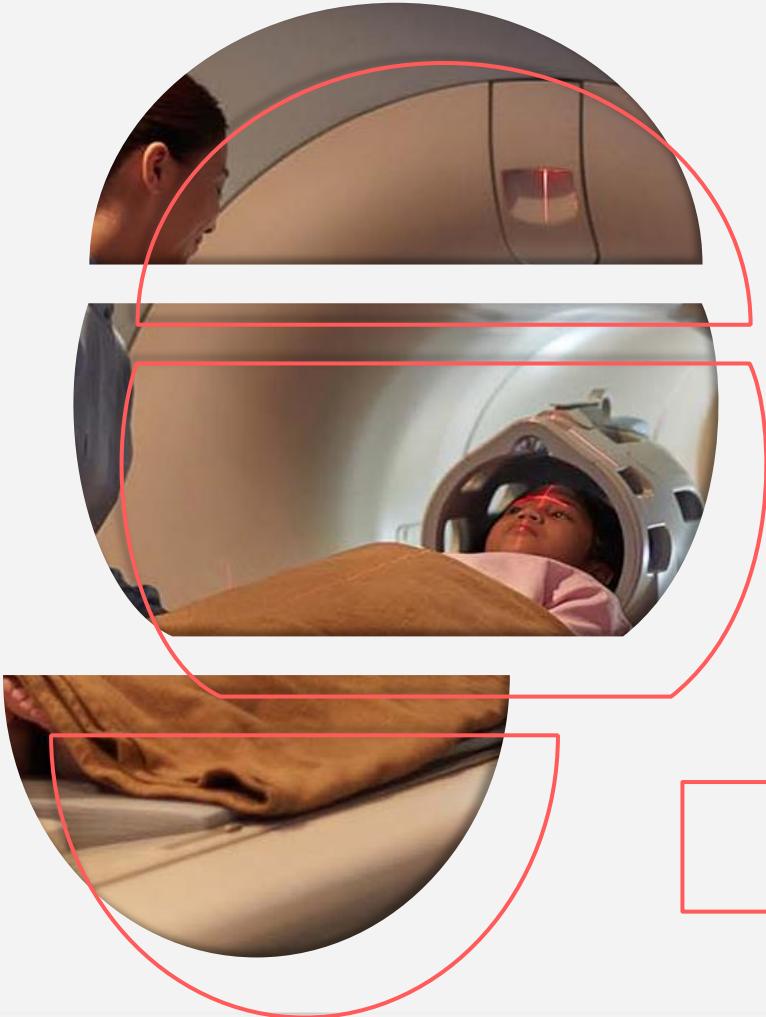
# EDA FINDINGS

	Pandas	PostgreSQL
Mercury		
Venus		
Mars		
Saturn		

---

03

# PURPOSE



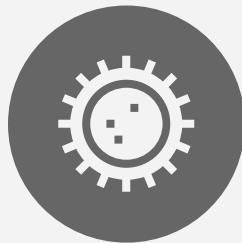
---

# WHY CHOOSE THIS TOPIC?

---



# QUESTIONS TO ANSWER...



## MERCURY

How successfully can a ML model be used to predict stroke risk?



## VENUS

Which aspect is more accurate to predict risk: medical or personal data?

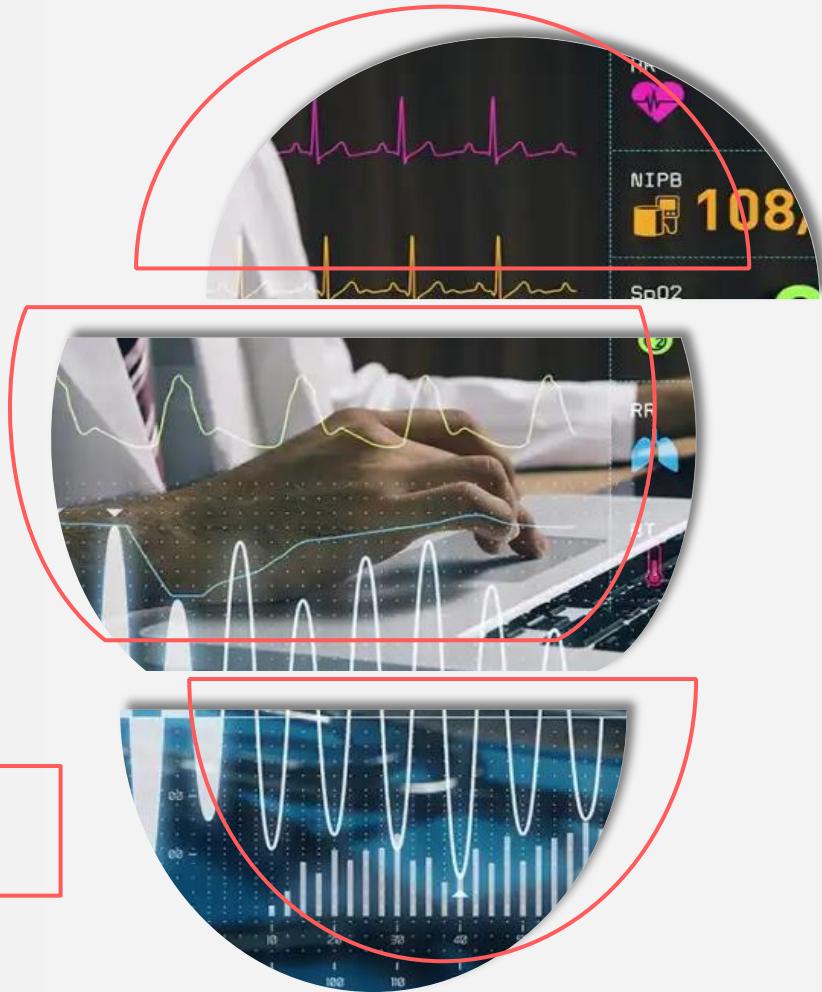


## MARS

\*\*\*

# 04

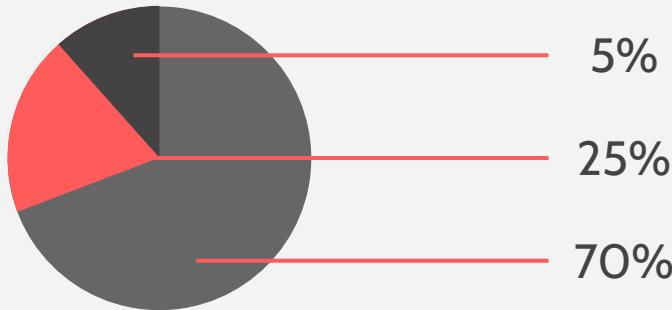
# ANALYSIS



# ANALYSIS

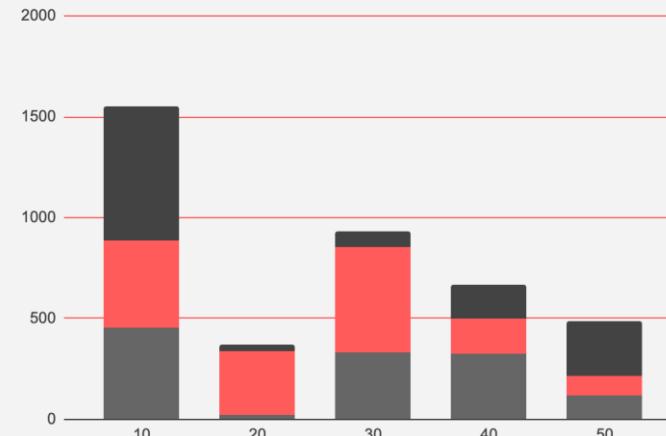
● Pluto     ● Sun     ● Jupiter

## EVOLUTION



**120,000,000**  
Important number

## PREVALENCE



Follow the link in the graph to modify its data and then paste the new one here. [For more info, click here](#)

**9h 55m 23s**

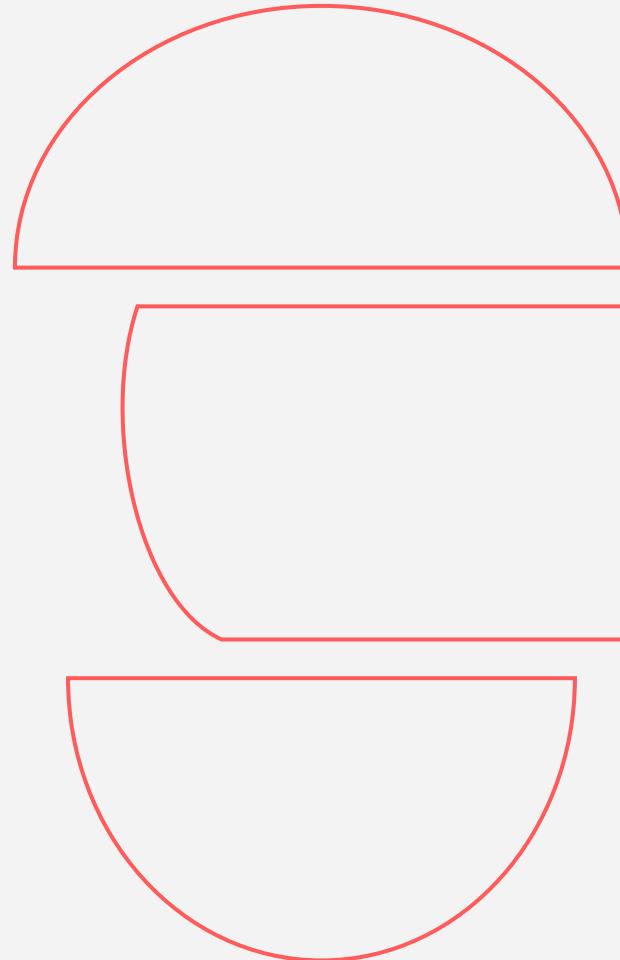
Is Jupiter's rotation period

**333,000,000**

Earths is the Sun's mass

**386,000 km**

Is the distance between Earth and the Moon



# RECOMMENDATIONS

## STEP 1

Venus is the second planet from the Sun



## STEP 3

Despite being red, Mars is a cold place



## STEP 2

Mercury is the smallest planet

## STEP 4

Neptune is very far from the Sun

# EDA FINDINGS

	Pandas	PostgreSQL
Mercury		
Venus		
Mars		
Saturn		

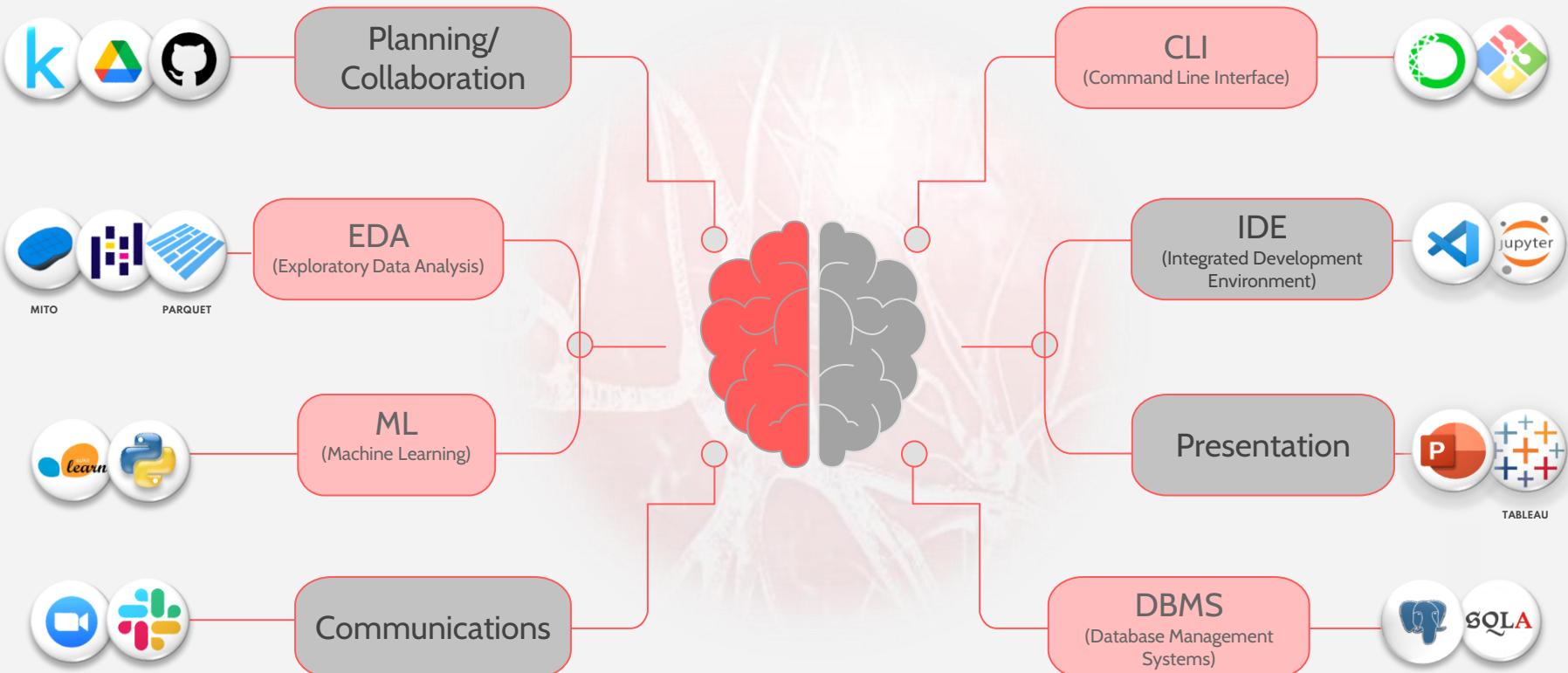
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05

# TOOLS



# PROJECT FRAMEWORK



06

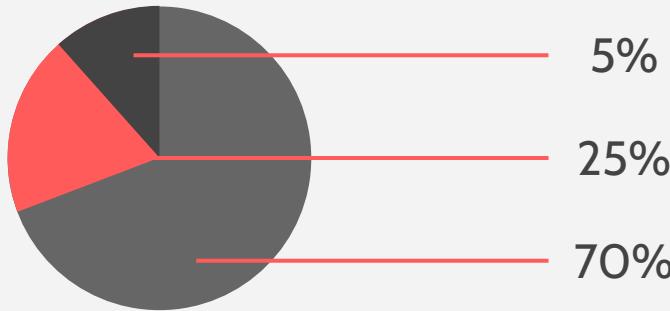
# CONCLUSIONS



# RESULTS

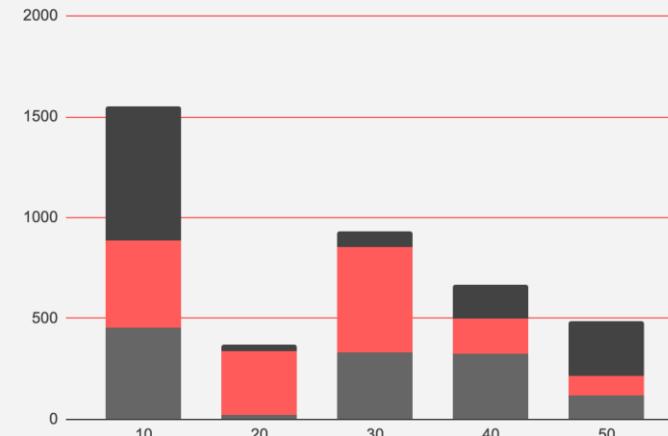
● Pluto     ● Sun     ● Jupiter

## EVOLUTION



**120,000,000**  
Important number

## PREVALENCE



Follow the link in the graph to modify its data and then paste the new one here. [For more info, click here](#)

**9h 55m 23s**

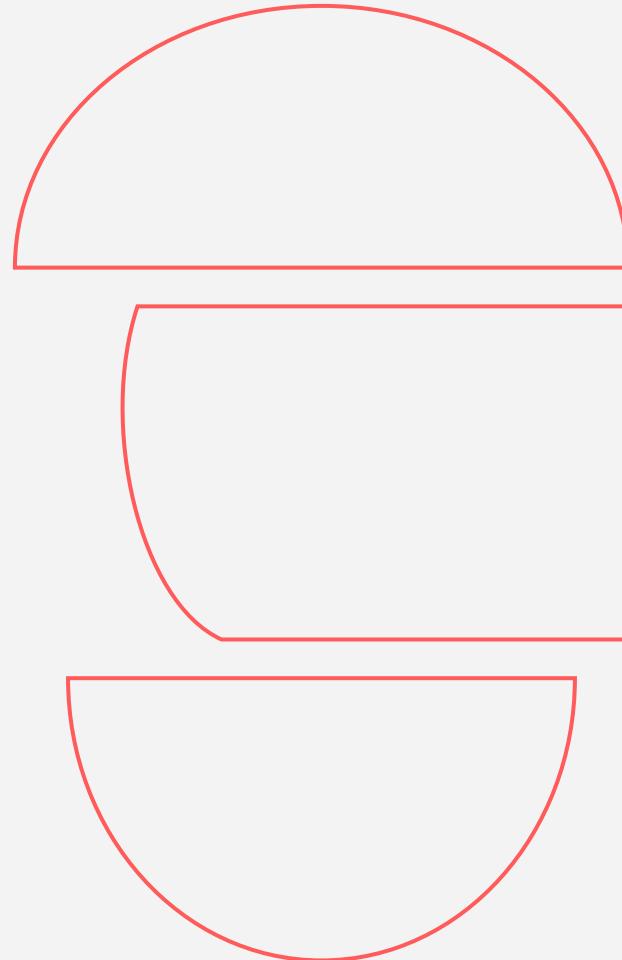
Is Jupiter's rotation period

**333,000,000**

Earths is the Sun's mass

**386,000 km**

Is the distance between Earth and the Moon



# RECOMMENDATIONS

## NEPTUNE

Mercury is the closest planet to the Sun and the smallest one



## JUPITER

Venus has a beautiful name and is the second planet from the Sun



Despite being red, Mars is actually a cold place. It's full of iron oxide dust



Saturn is a gas giant and has several rings. It's composed of hydrogen



# RECOMMENDATIONS

## STEP 1

Venus is the second planet from the Sun



## STEP 3

Despite being red, Mars is a cold place



## STEP 2

Mercury is the smallest planet

## STEP 4

Neptune is very far from the Sun

# WHAT WOULD WE HAVE DONE DIFFERENTLY?

Here's what you'll find in this [Slidesgo](#) template:

1. Used a larger dataset.
  
2. found in the [alternative resources slide](#).
3. A [thanks slide](#), which you must keep so that proper credits for our design are given.
4. A [resources slide](#), where you'll find links to all the elements used in the template.
5. [Instructions for use](#).
6. Final slides with:
  - The [fonts](#)
  - A [selection of illustrations](#). You
  - More [infographic resources](#), whose size and color can be edited.
  - Sets of [customizable icons](#) of the following themes.

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# REFERENCES

# THANKS!

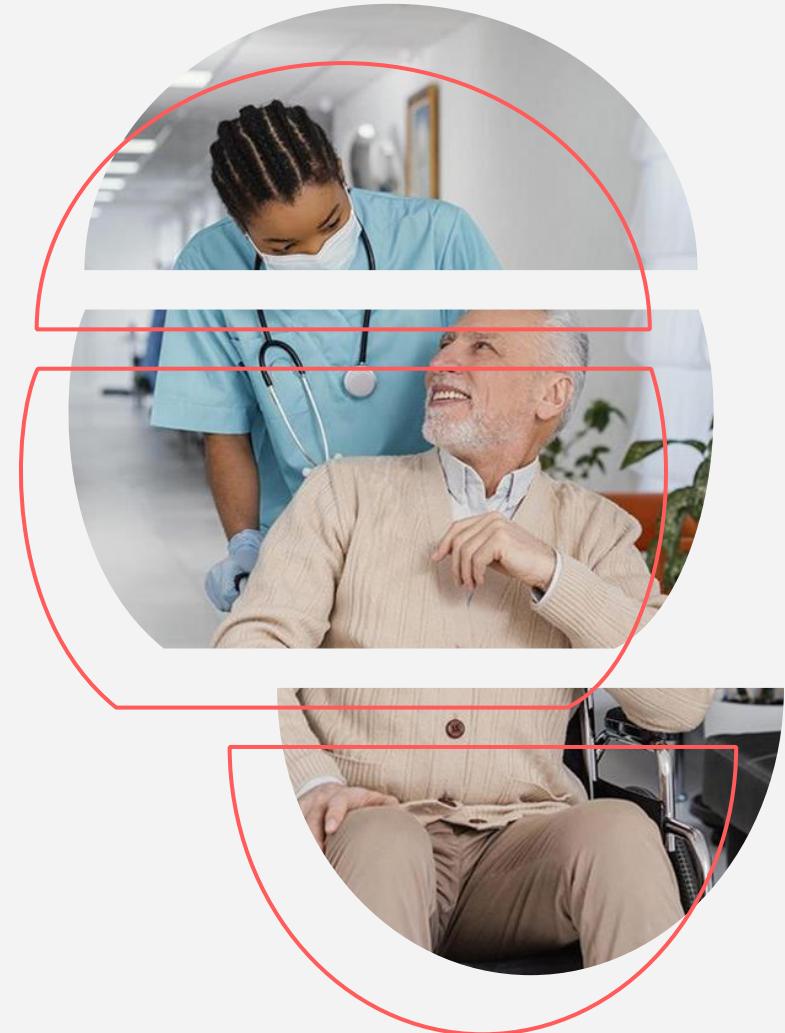


**DO YOU HAVE ANY QUESTIONS?**

info@SAML.com

+1 512 555 SAML

[https://github.com/boborodono/San\\_Antonio](https://github.com/boborodono/San_Antonio)





**END OF  
SLIDE DECK**

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(<https://fonts.google.com/specimen/Spartan>)

**Cabin**

(<https://fonts.google.com/specimen/Cabin>)

#434343

#f3f3f3

#ff5b5b

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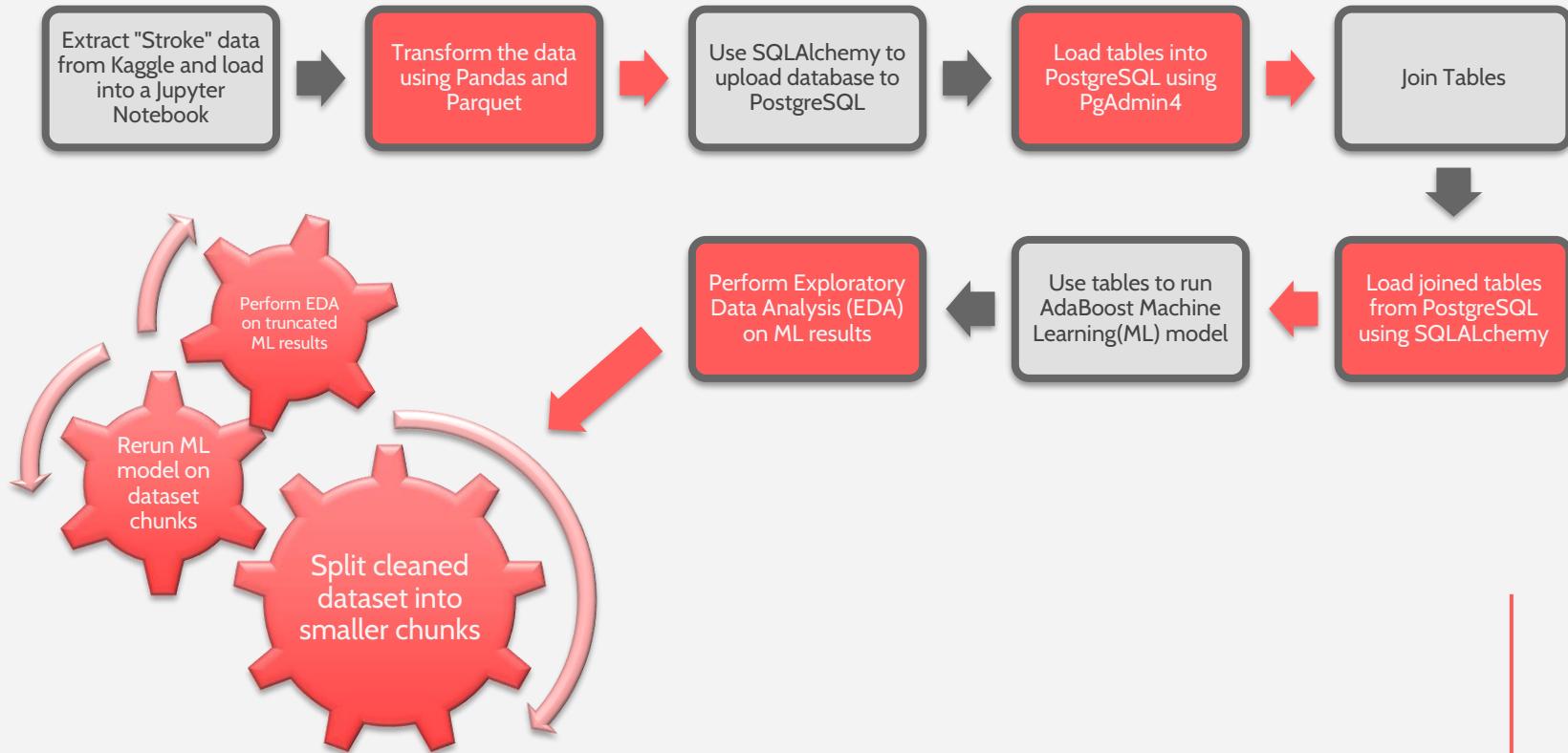
# PROJECT OUTLINE

# TECHNOLOGIES

Languages	Tools	Collaboration & Storage	Communications	CLIs	IDEs	Presentation/Dashboard
 PYTHON	 PANDAS	 GOOGLE DRIVE	 SLACK	 ANACONDA	 JUPYTER NOTEBOOK	 TABLEAU
 POSTGRESQL	 MITO	 GITHUB	 ZOOM	 GITBASH	 VS CODE	 POWERPOINT
	 PARQUET	 KAGGLE			 PgADMIN	
	 SCIKIT-LEARN	 GIT				
 SQLALCHEMY						



# PROJECT OUTLINE



**END OF  
FONTS &  
COLOR**

Data Cleaning and Analysis - Jupyter Notebook and the Pandas library will be used to clean the data and perform an exploratory analysis. Further analysis will be completed using Python. Jupyter was selected because of the team's familiarity with the tool. Python was chosen because of its libraries for data ingestion and analysis such as Pandas and the ease of creating Machine Learning models using SKLearn as well as visualization capabilities in Matplotlib.

Database Storage - Postgres is the database used. It is easy to implement and run MySQL queries. We decided against AWS RDS because of the associated costs and several team members had already cancelled their accounts.

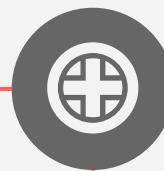
Machine Learning - SciKitLearn is the ML library we'll be using to create a linear regression. We'll train our algorithm with a historical dataset on Covid Vaccinations and GDP of all countries.

Dashboard - We created an interactive Tableau dashboard to visualize the data and help tell the story of how the vaccination library to build an interactive webpage hosted in GitHub Pages. In addition, we will include the D3 library to visualize our data geographically. A webpage was unanimously agreed upon because of ease of display without a user having to install Tableau or PowerBI.

# PREVENTION EASE

## STEP 1

Venus is the second planet from the Sun



## STEP 3

Despite being red, Mars is a cold place



## STEP 2

Mercury is the smallest planet

## STEP 4

Neptune is very far from the Sun

# CONCLUSIONS

Do you know what helps you make your point clear?

Lists like this one:

- They're simple
- You can organize your ideas clearly
- You'll never forget to buy milk!

And the most important thing: the audience won't miss the point of your presentation



# CONTENTS OF THIS TEMPLATE

Here's what you'll find in this **Slidesgo** template:

1. A slide structure based on a medical presentation, which you can easily adapt to your needs. For more info on how to edit the template, please visit [Slidesgo School](#) or read our [FAQs](#).
2. An assortment of graphic resources that are suitable for use in the presentation can be found in the [alternative resources slide](#).
3. A [thanks slide](#), which you must keep so that proper credits for our design are given.
4. A [resources slide](#), where you'll find links to all the elements used in the template.
5. [Instructions for use](#).
6. Final slides with:
  - The [fonts and colors](#) used in the template.
  - A [selection of illustrations](#). You can also customize and animate them as you wish with the online editor. Visit [Storyset](#) to find more.
  - [More infographic resources](#), whose size and color can be edited.
  - Sets of [customizable icons](#) of the following themes: general, business, avatar, creative process, education, help & support, medical, nature, performing arts, SEO & marketing, and teamwork.

You can delete this slide when you're done editing the presentation.



A PICTURE  
IS WORTH A  
THOUSAND  
WORDS



# RESULTS



**EXPERIMENT A**

	TEST 1	TEST 2	TEST 3
1	121	133	453
2	165	232	324
3	114	153	513
4	90	133	560

**EXPERIMENT B**

	TEST 1	TEST 2	TEST 3
1	121	133	453
2	165	232	324
3	114	153	513
4	90	133	560

# RESULTS ANALYSIS



**VENUS**

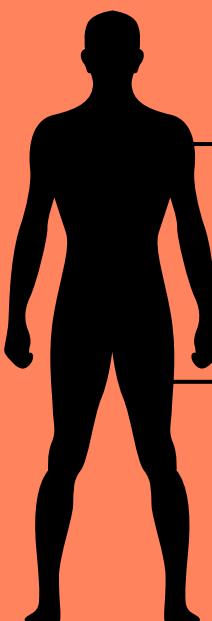
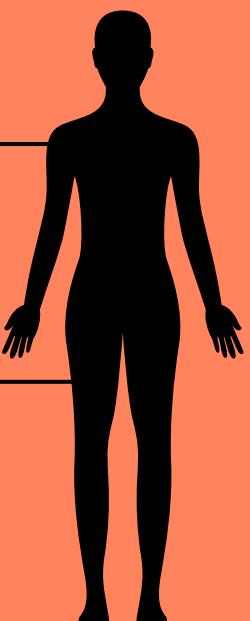
**60%**

Venus has a beautiful name, but it's too hot

**MERCURY**

**40%**

Mercury is the closest planet from the Sun



**70%**

**SATURN**

It's composed of hydrogen and helium

**30%**

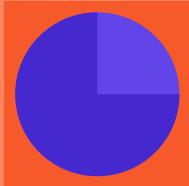
**NEPTUNE**

Jupiter is the biggest planet of them all

# SUCCESS RATE

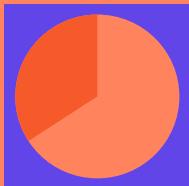


## PATIENTS CURED



**75%** **VENUS**

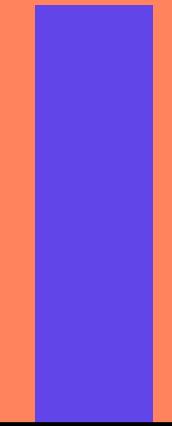
Venus has a beautiful name, but it's too hot



**35%** **MARS**

Despite being red, Mars is a very cold place

## SECONDARY EFFECTS



**55.000**

with side effects

**32.000**

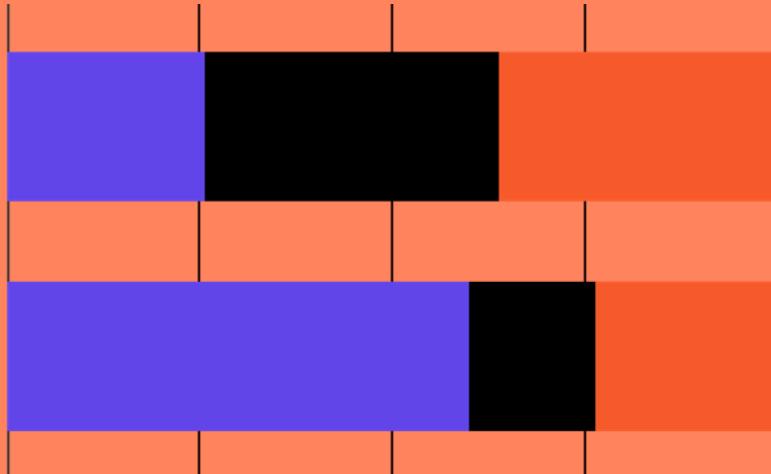
no side effects



# CONCLUSIONS

Mercury is the closest planet to the Sun. The planet's name has nothing to do with the liquid metal since it was named after the Roman messenger god, Mercury

# TENDENCY



To modify this graph, click on it, follow the link, change the data and paste the new graph here, replacing this one



**24%** **VENUS**

Venus has a beautiful name, but it's too hot



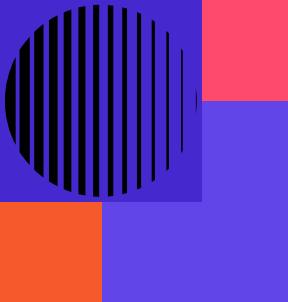
**36%** **JUPITER**

It's the biggest planet in our Solar System



**34%** **MERCURY**

Mercury is the closest planet from the Sun



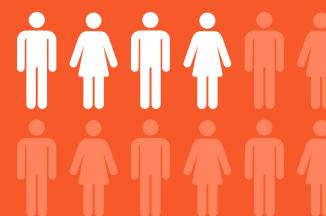
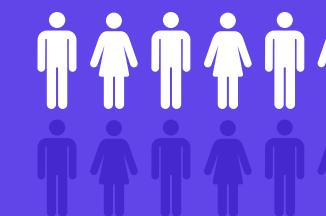
3

# RESULT ANALYSIS

You can enter a subtitle  
here if you need it



# CLINICAL TRIAL

			
<b>PRECLINICAL</b>	<b>PHASE 1</b>	<b>PHASE 2</b>	<b>PHASE 3</b>
Lab Studies	Human Safety	Expanded Safety	Efficacy & Safety
<b>&lt;20 participants</b>	<b>100 participants</b>	<b>250 participants</b>	<b>500&gt; participants</b>



# A Picture Is Worth a Thousand Words



# Conclusions



## Conclusion 1

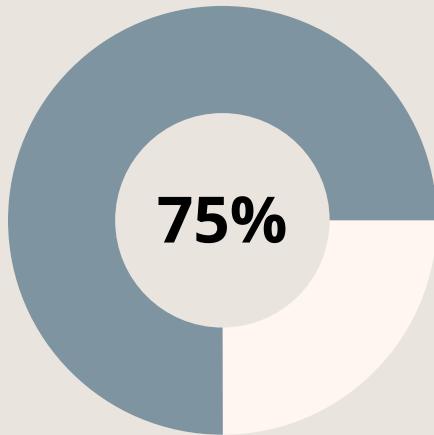
Mercury is the closest planet to the Sun and the smallest one



## Conclusion 2

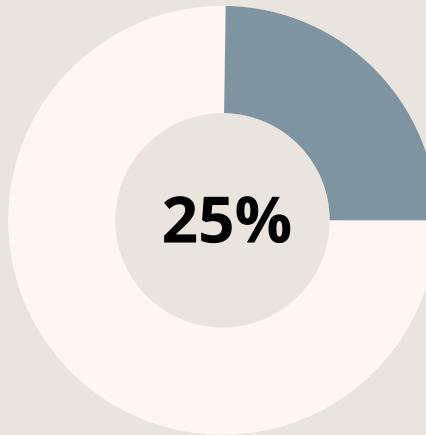
Venus has a beautiful name, but also high temperatures

# How About the Percentages?



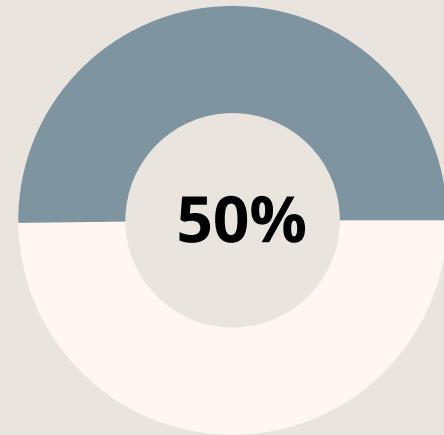
**Mercury**

It's the closest planet  
to the Sun



**Saturn**

Saturn is a gas giant  
and has rings



**Mars**

Despite being red  
Mars is a cold place

# 70%

Of people can eventually stop taking  
medication

# 10 years

Epileptic seizures are considered resolved

# 5 minutes

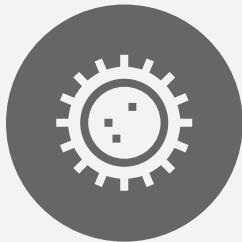
Seizures requiring emergency treatment

# 50 M

People suffer from epilepsy in the world

**END OF  
SLIDES FOR  
REUSE**

# ABOUT THE DISEASE



## MERCURY

It's the closest planet to the Sun and the smallest in the Solar System



## VENUS

Venus has a beautiful name and is the second planet from the Sun



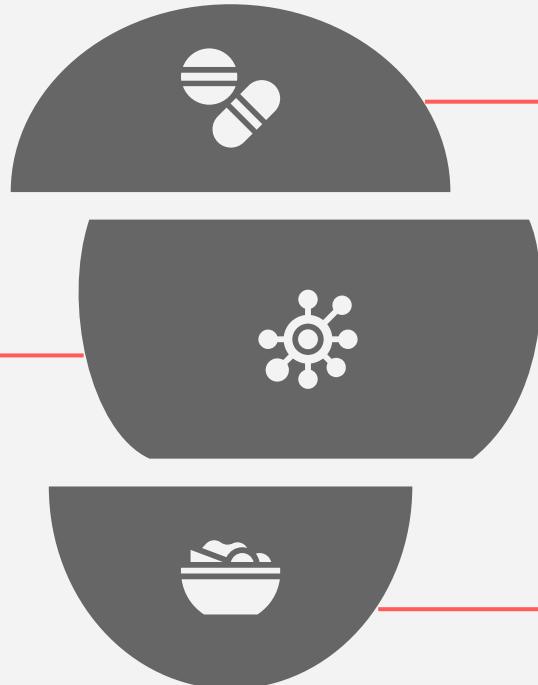
## MARS

Despite being red, Mars is actually a cold place. It's full of iron oxide dust

# ABOUT THE DISEASE

## MERCURY

It's the closest planet to the Sun and the smallest one



## MARS

Mars is actually a cold place. It's full of iron oxide dust

## VENUS

Venus has a beautiful name and is the second planet

# CONCEPTS AND TYPOLOGY

## TYPE A

It's the closest planet to the Sun and the smallest in the Solar System

## TYPE B

Venus has a beautiful name and is the second planet from the Sun

## GESTATIONAL

Despite being red, Mars is actually a cold place. It's full of iron oxide dust

# PATHOLOGY



## VENUS

Venus has a beautiful name and is the second planet from the Sun



## MARS

Despite being red, Mars is actually a cold place. It's full of iron oxide dust



## NEPTUNE

It's the closest planet to the Sun and the smallest in the Solar System



## SATURN

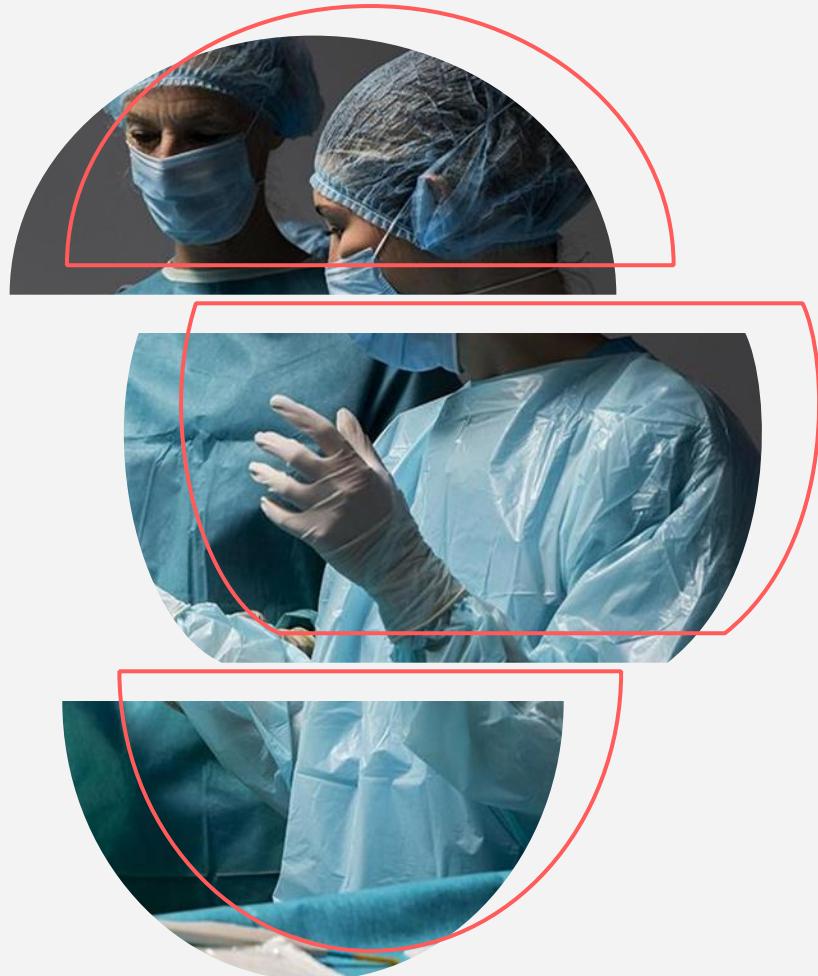
Saturn is a gas giant and has several rings. It's composed mostly of hydrogen

60,000,000

Big numbers catch your audience's attention

“This is a quote, words full of wisdom that someone important said and can make the reader get inspired.”

**SOMEONE FAMOUS**



# PREVENTION

## STEP 1

Venus is the second planet from the Sun



## STEP 3

Despite being red, Mars is a cold place



## STEP 2

Mercury is the smallest planet

## STEP 4

Neptune is very far from the Sun

# RECOMMENDATIONS

## NEPTUNE

Mercury is the closest planet to the Sun and the smallest one



Venus has a beautiful name and is the second planet from the Sun



Despite being red, Mars is actually a cold place. It's full of iron oxide dust

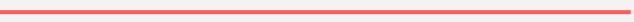


Saturn is a gas giant and has several rings. It's composed of hydrogen





# **AWESOME WORDS**



# WRLD. CANCER AWRNSS. DAY PACK

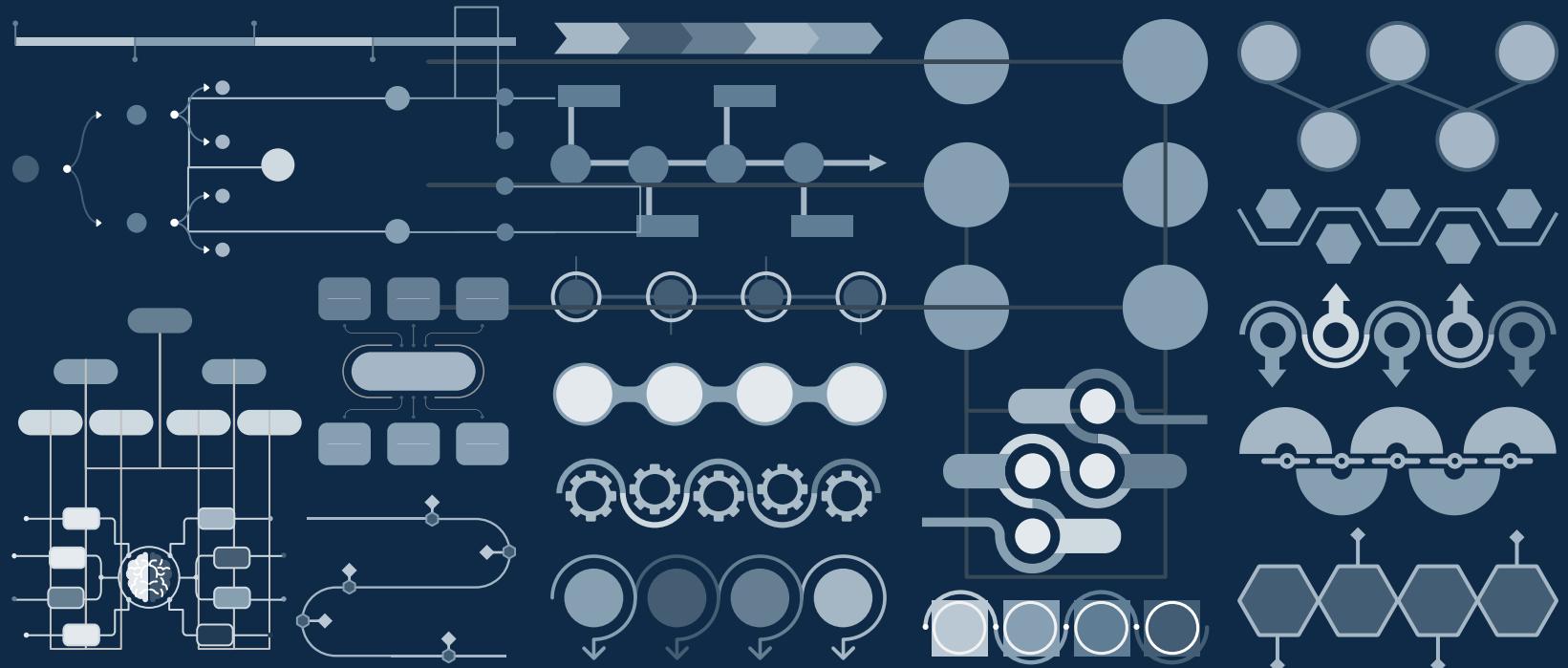


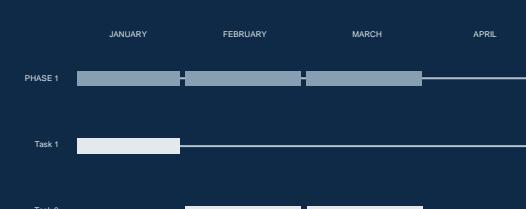
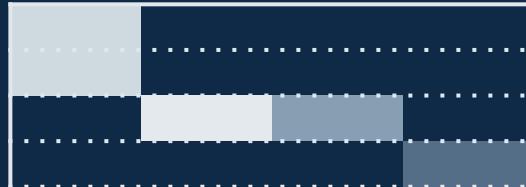
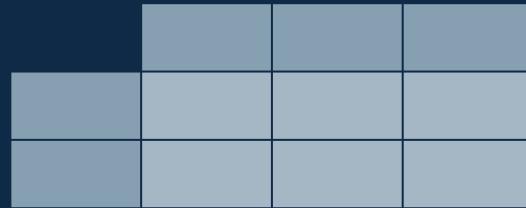
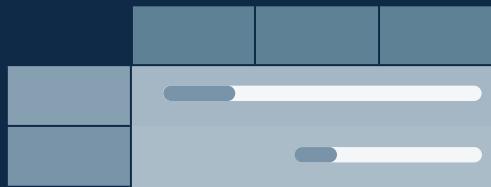
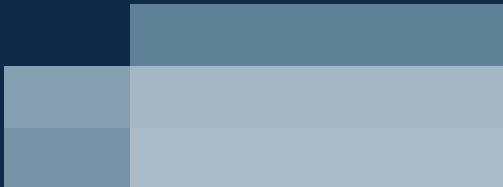
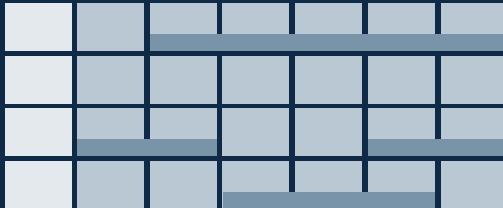
**Use our editable graphic resources...**

You can easily resize these resources without losing quality. To change the color, just ungroup the resource and click on the object you want to change. Then, click on the paint bucket and select the color you want. Group the resource again when you're done. You can also look for more infographics on Slidesgo.

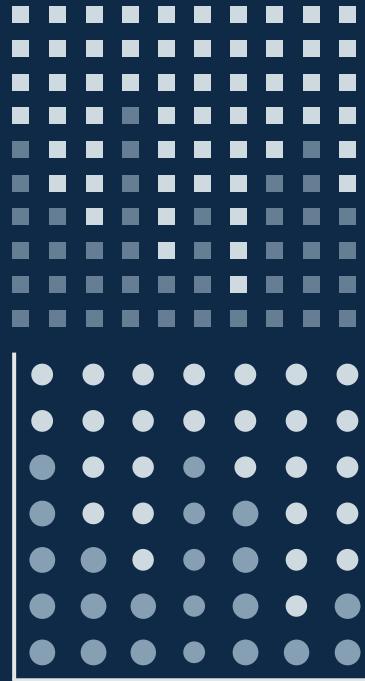












# ...and our sets of editable icons

You can resize these icons without losing quality.

You can change the stroke and fill color; just select the icon and click on the paint bucket/pen.

In Google Slides, you can also use Flaticon's extension, allowing you to customize and add even more icons.



## Educational Icons



## Medical Icons



## Business Icons



## Teamwork Icons



## Help & Support Icons



## Avatar Icons



## Creative Process Icons



## Performing Arts Icons



# Nature Icons



# SEO & Marketing Icons

