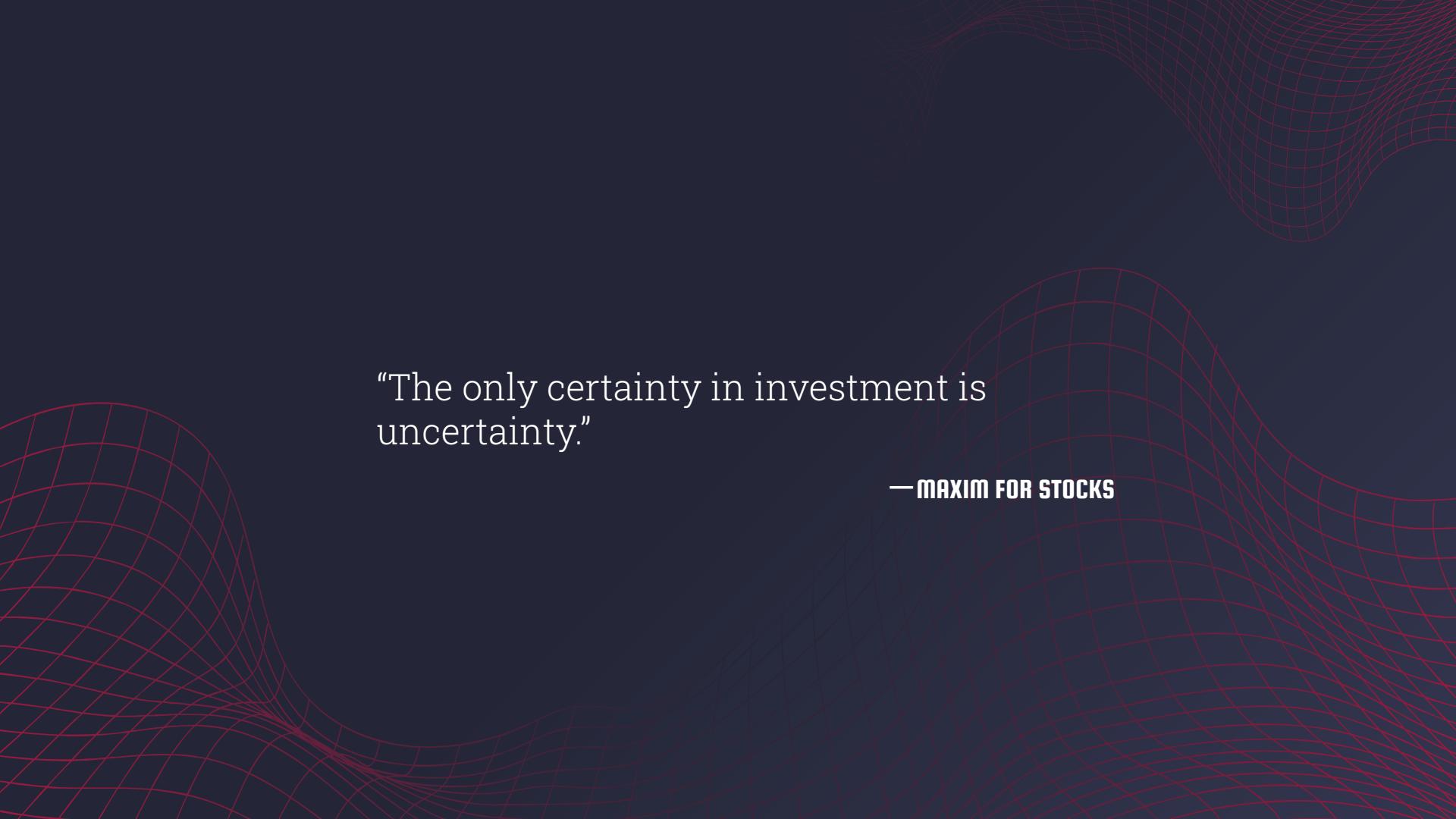




USING NEWS HEADLINES FOR STOCK MARKET PREDICTION

Why Stock Market Prediction?

The Market is Highly Stochastic

The background features a dark gray gradient with three prominent, wavy, red wireframe mesh curves. One curve is on the left, another is at the top right, and a third is on the right side, all curving towards the center.

“The only certainty in investment is uncertainty.”

— MAXIM FOR STOCKS

CAN WE REALLY PREDICT US STOCK MARKET NEWS? NEWS?

Let's find out...



MANY RESEARCH PAPERS SUGGEST ...



MEDIA SENTIMENT IS
AN IMPORTANT
PREDICTOR OF DAILY
STOCK RETURNS



INCREASE IN
OPTIMISTIC NEWS
PREDICTS A SHORT RUN
INCREASE IN STOCK
RETURNS



PESSIMISTIC NEWS IS
ASSOCIATED WITH A
TEMPORARY DECREASE
IN STOCK RETURNS

01

EXTRACTING SENTIMENTS FROM NEWS HEADLINES

Using VADER Sentiments

02

PREDICT STOCK TRENDS BASED ON SENTIMENTS

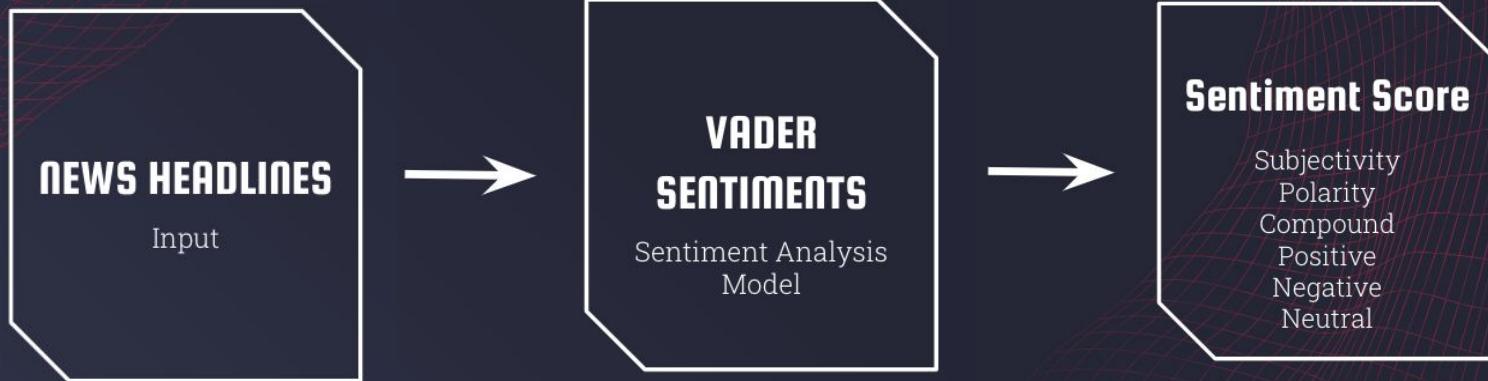
Using Machine Learning models
(XGBoost)

01

EXTRACTING SENTIMENTS FROM NEWS HEADLINES

VADER Sentiments

VADER SENTIMENTS



[Entity] [Negative]

[Aspect]



“U.S. GDP fell at a 5% rate in the first quarter, and the worse is likely on the way”



[Opinion]

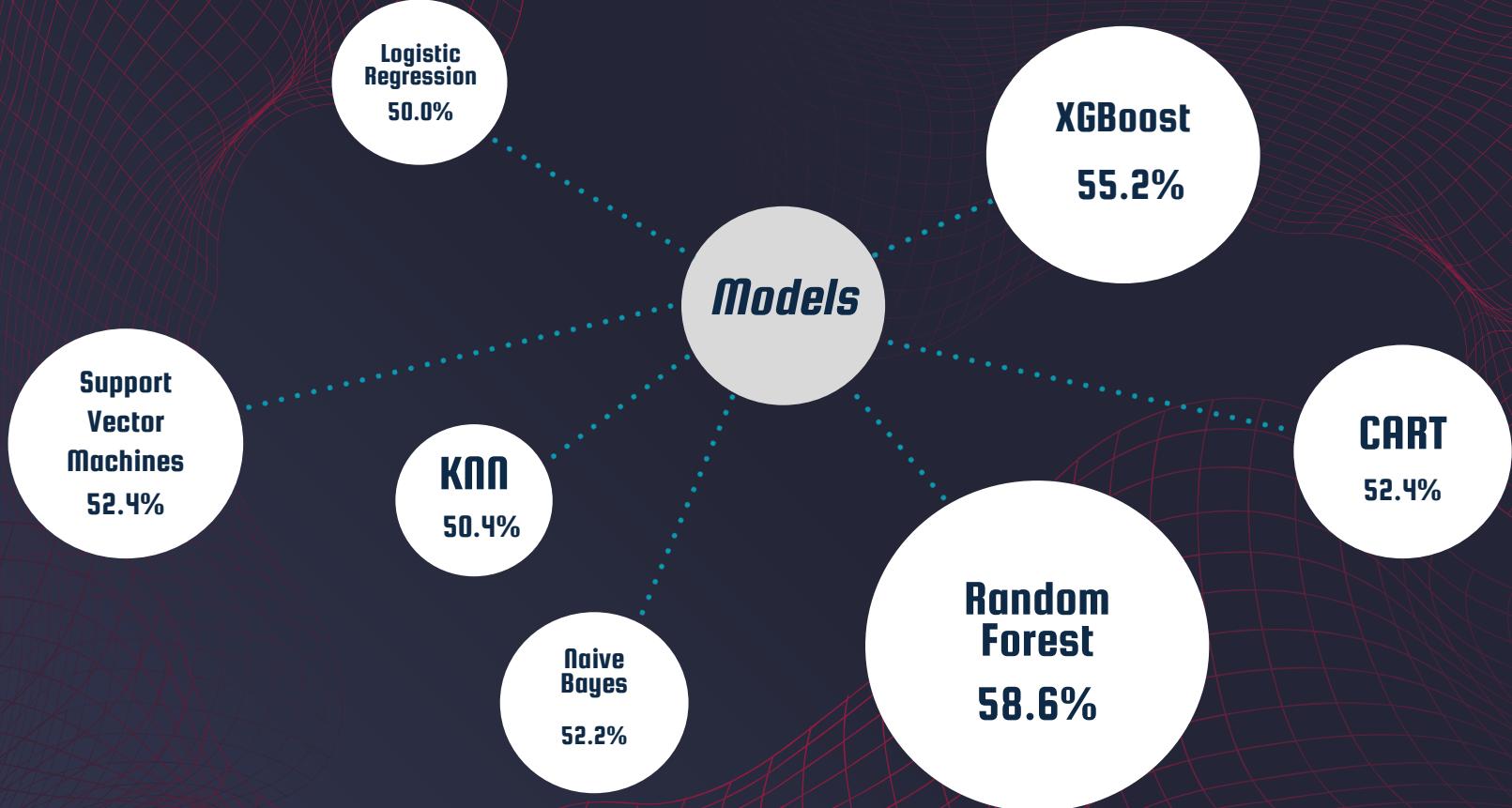
Stop Words Removal: [a, in, the, and]

Subjectivity	Polarity	Compound	Negative	Neutral	Positive
0.267549	-0.048568	-0.9982	0.235	0.724	0.041

02

PREDICT STOCK TRENDS BASED ON SENTIMENTS

Using Machine Learning models
(LDA and XGBoost)



Curse of Dimensionality

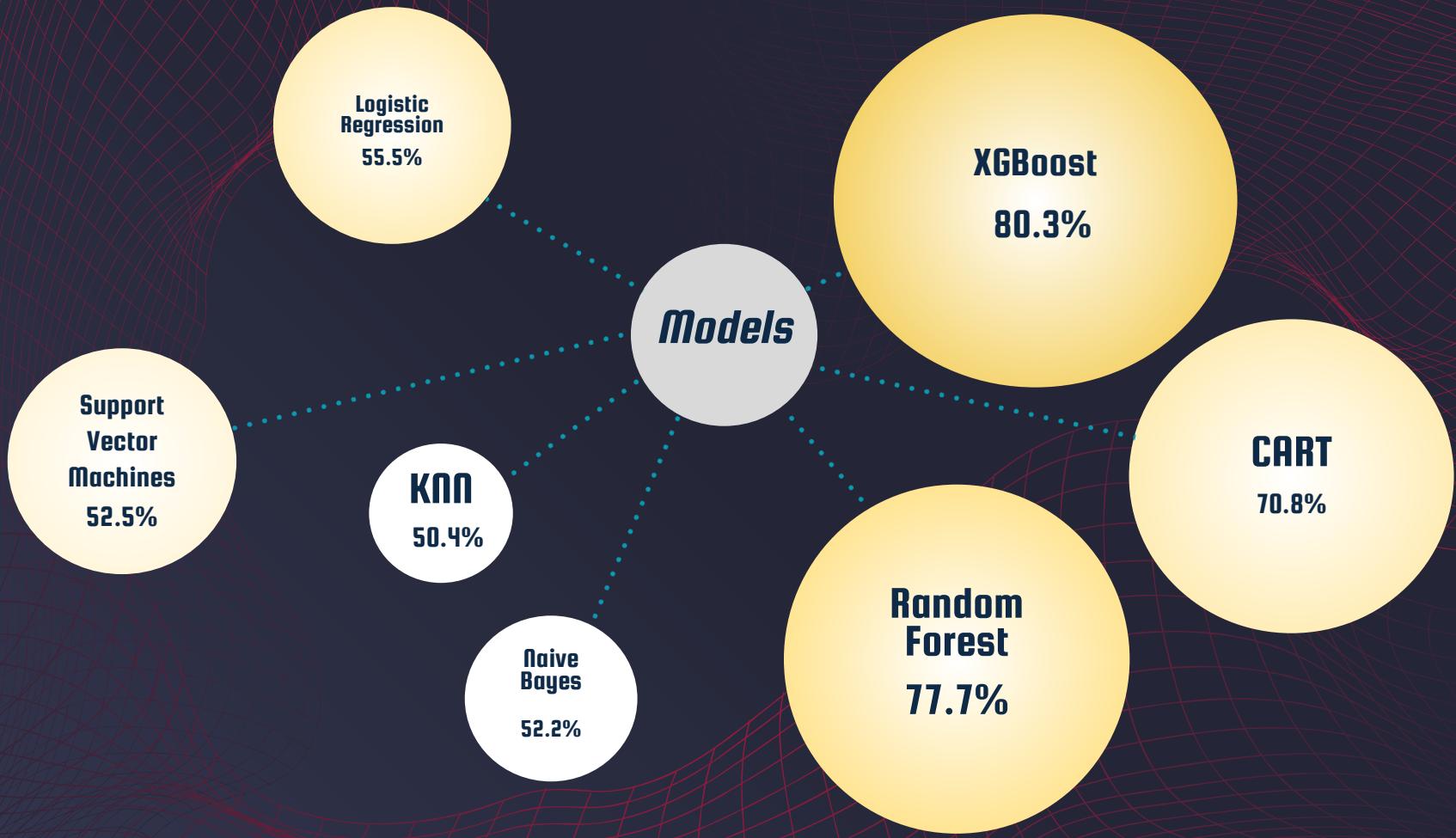
Risk of overfitting

Difficulty in clustering

PCA

Principal **C**omponent **A**nalysis

- Extract features based on variance



LDA

Linear Discriminant Analysis

- Project features in higher dimension space to lower dimensions.
- Maximizes separability

RESULTS COMPARISON

ACCURACY:

81.2%

LDA

ACCURACY:

80.3%

XGBoost With PCA

LDA

81.2%

accuracy when using news sentiments to predict stock prices

NEWS SENTIMENTS: A GOOD INDICATOR

To predict your stocks.





A dark blue background featuring a subtle, abstract pattern of red wireframe mesh curves that curve and twist across the frame.

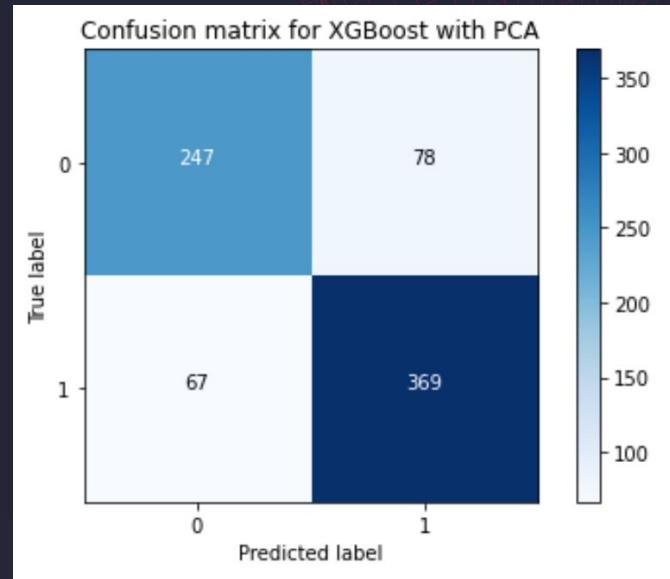
THANKS!

RESULTS COMPARISON

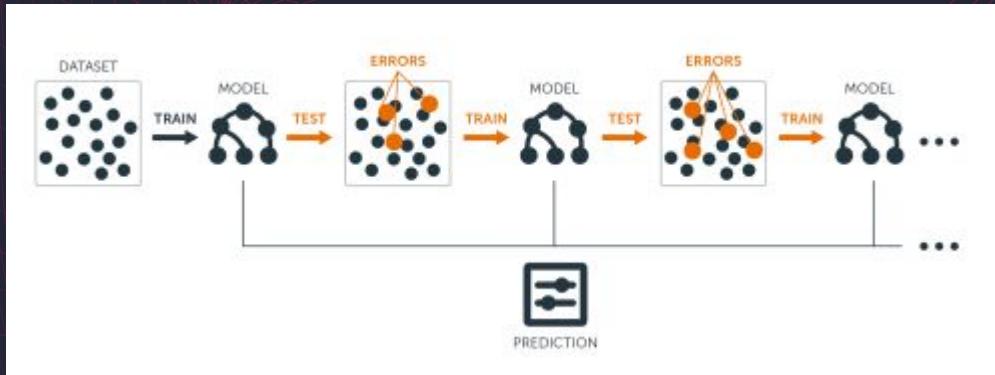
Confusion Matrix



Without PCA



With PCA



XGBoost

eXtreme Gradient Boosting (Ensemble Model)

- Combines a set of weak learners to improve prediction accuracy.
- Focuses on the misclassified results to generate another model.
- Consolidate all the models based on their accuracy.

Predict the results based on the trained model.

THIS IS A GREAT HEADLINE

And this is the subtitle that makes it
comprehensible

THE SLIDE TITLE GOES HERE!

Do you know what helps you make your point clear? Lists like this one:

- Because they're simple
- You can organize your ideas clearly
- And because you'll never forget to buy milk!

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

MAYBE YOU NEED TO DIVIDE THE CONTENT



MERCURY

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than our Moon. The planet's name has nothing to do with the liquid metal since it was named after the Roman messenger god



VENUS

Venus has a beautiful name and is the second planet from the Sun. It's terribly hot—even hotter than Mercury—and its atmosphere is extremely poisonous. It's the second-brightest natural object in the night sky after the Moon

YOU COULD USE THREE COLUMNS, WHY NOT?



MARS

Despite being red, Mars is a cold place, not hot. It's full of iron oxide dust, which gives the planet its reddish cast



JUPITER

It's the biggest planet in our Solar System and also the fourth-brightest object in the sky



SATURN

Yes, this is the ringed one. It's a gas giant, composed mostly of hydrogen and helium

A PICTURE ALWAYS REINFORCES THE CONCEPT

Images reveal large amounts of data, so remember: use an image instead of long texts. Your audience will appreciate that





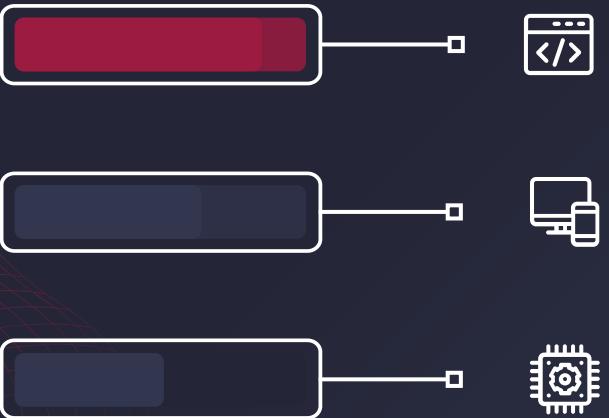
A PICTURE IS WORTH A THOUSAND WORDS

02

DATA ANALYTICS

This is the subtitle that makes it
comprehensible

**INFOGRAPHICS MAKE YOUR IDEA
UNDERSTANDABLE...**



...AND THE SAME GOES FOR TABLES

	MASS (earths)	DIAMETER (earths)	SURFACE GRAVITY (earths)
MERCURY	0,06	0,38	0,38
MARS	0,11	0,53	0,38
SATURN	95,2	9,4	1,16

THIS IS A MAP



VENUS

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

MERCURY

Mercury is the closest planet to the Sun

MARS

Despite being red, Mars is a cold place, not hot

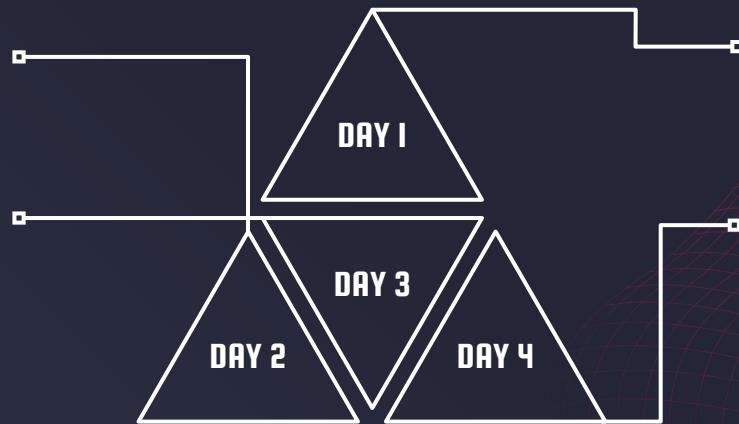
A TIMELINE ALWAYS WORKS FINE

Jupiter is the biggest planet in our Solar System

Mercury is the smallest planet in our Solar System

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

Despite being red, Mars is a cold place, not hot



HOW ABOUT THE PERCENTAGES?



MERCURY



VENUS



MARS

03

BUSINESS OBJECTIVES

This is the subtitle that makes it
comprehensible

4,498,300,000

Big numbers catch your audience's attention

333,000.00

earths is the Sun's mass

24h 37m 23s

is Jupiter's rotation period

386,000 km

is the distance between the Earth and the Moon

SOMETIMES, REVIEWING CONCEPTS IS A GOOD IDEA



MERCURY

Mercury is the closest planet to the Sun and is only a bit larger than our Moon



SATURN

Yes, this is the ringed one. It's a gas giant, composed mostly of hydrogen and helium



VENUS

Venus has a beautiful name, but it's terribly hot, even hotter than Mercury



JUPITER

Jupiter is a gas giant and the biggest planet in our Solar System



MARS

Despite being red, Mars is a cold place, not hot. The planet is full of iron oxide dust



NEPTUNE

Neptune is the fourth-largest planet in our Solar System and the farthest from the Sun

COMPANY SERVICES



Venus has a beautiful name, but it's terribly hot, even hotter than Mercury



Jupiter is a gas giant and the biggest planet in our Solar System



Neptune is the fourth-largest planet in our Solar System

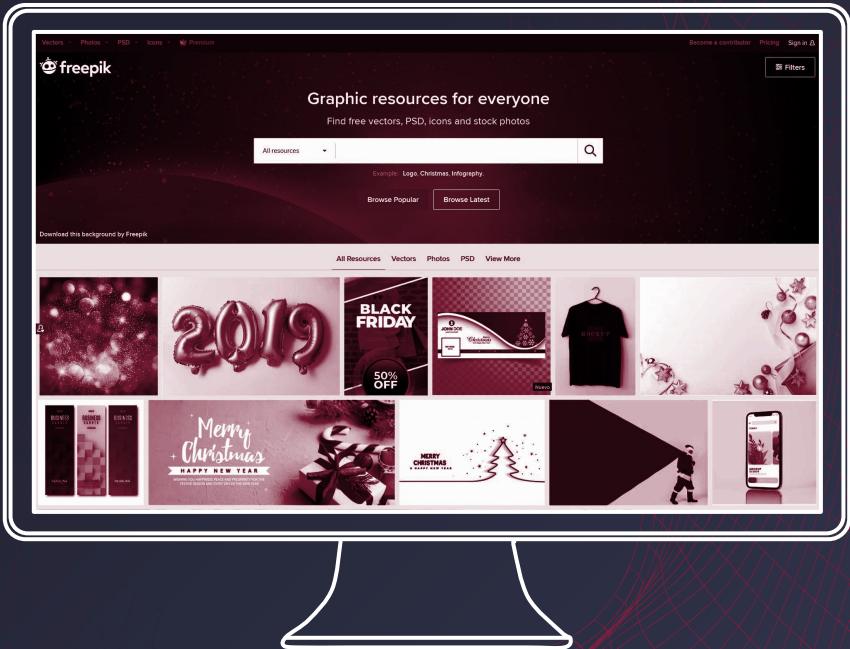
04

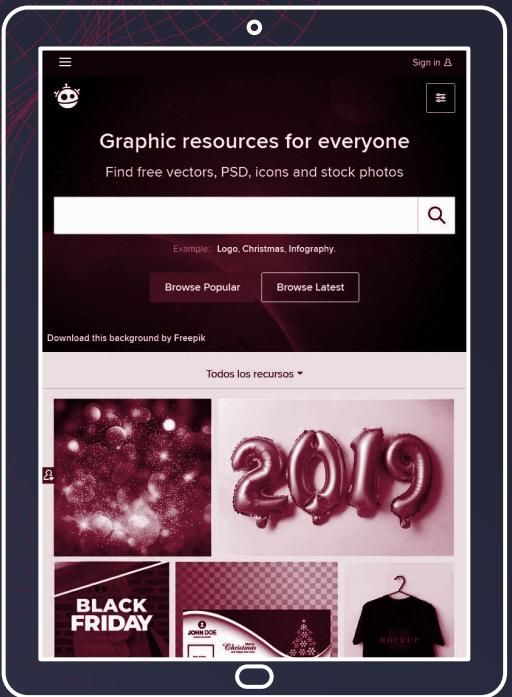
SOCIAL MEDIA

This is the subtitle that makes it
comprehensible

DESKTOP SOFTWARE

You can replace the image on the screen with your own work. Just delete this one, add yours and send it to the back



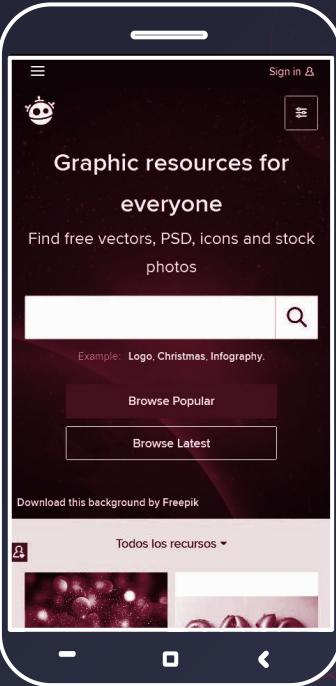


TABLET APP

You can replace the image on the screen with your own work. Just delete this one, add yours and send it to the back

MOBILE WEB

You can replace the image on the screen with your own work. Just delete this one, add yours and send it to the back



MEET THE TEAM



HELENA JAMES

You can replace the image on
the screen with your own



JOHN PATTERSON

You can replace the image on
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#33364f

#9c1b40

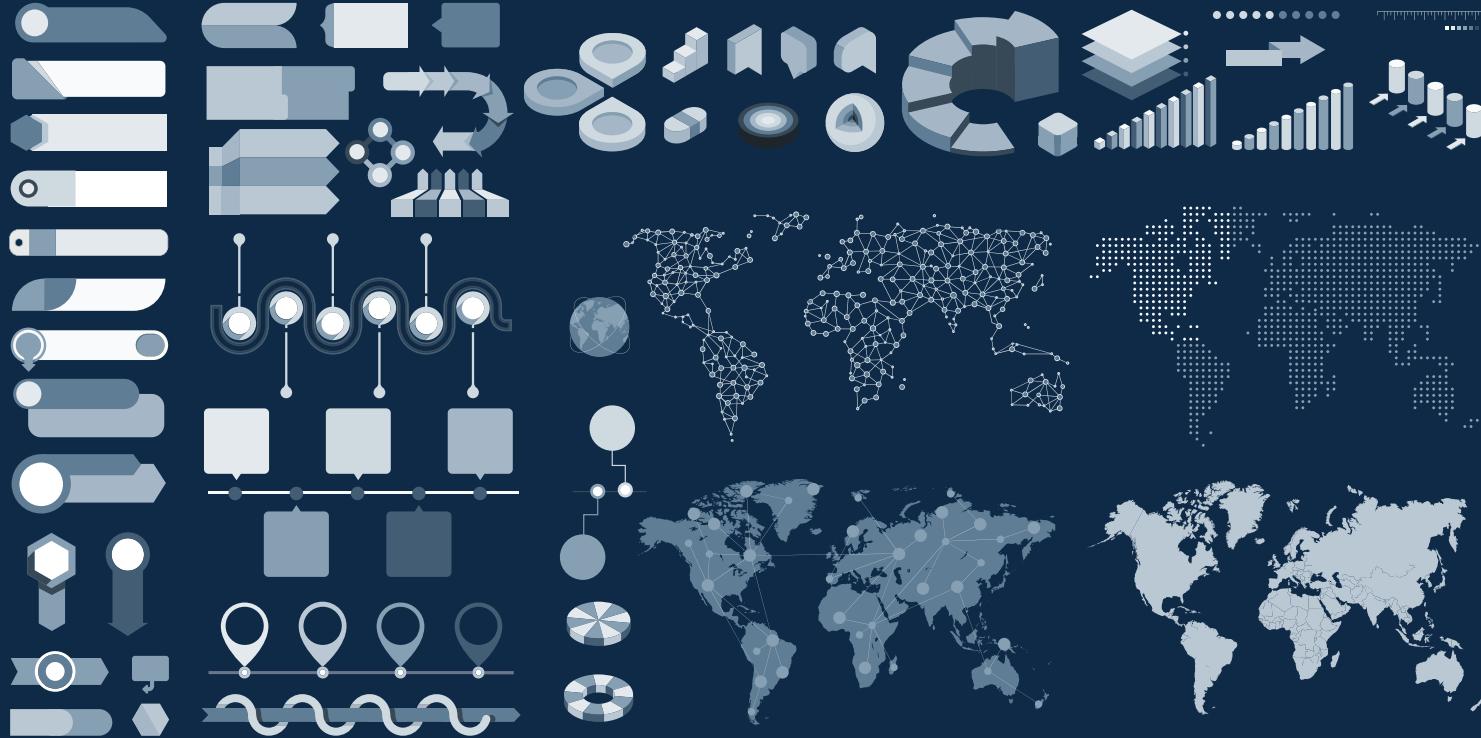
#999999

#ffffff

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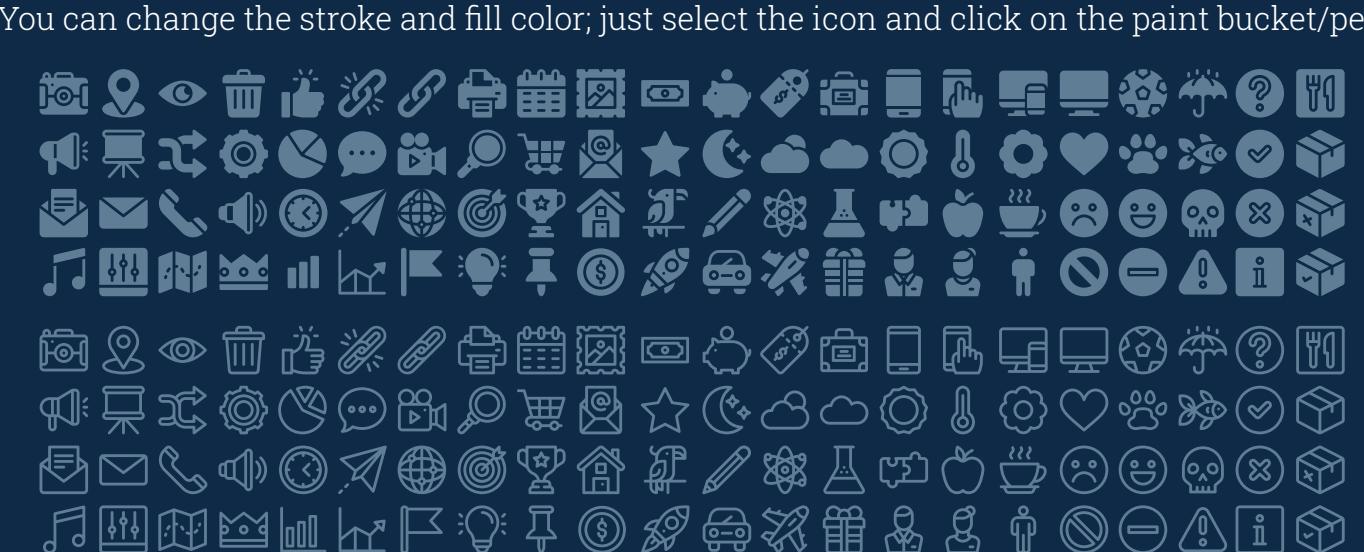
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...and our set of **editable icons**

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Help & Support Icons



Medical Icons



Nature Icons



Performing Arts Icons



SEO & Marketing Icons



Teamwork Icons



