



climate Change in California

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Topic

Our study investigates impact of climate change on temperature variations and wildfire patterns in CA. Utilizing geospatial data and visualization techniques, the analysis focuses on understanding relationship between rising temperatures and frequency and intensity of wildfires over time.

Datasets & tools

Datasets

- CA wildfire parameters geojson
- CA cities monthly average temperature

New Tools

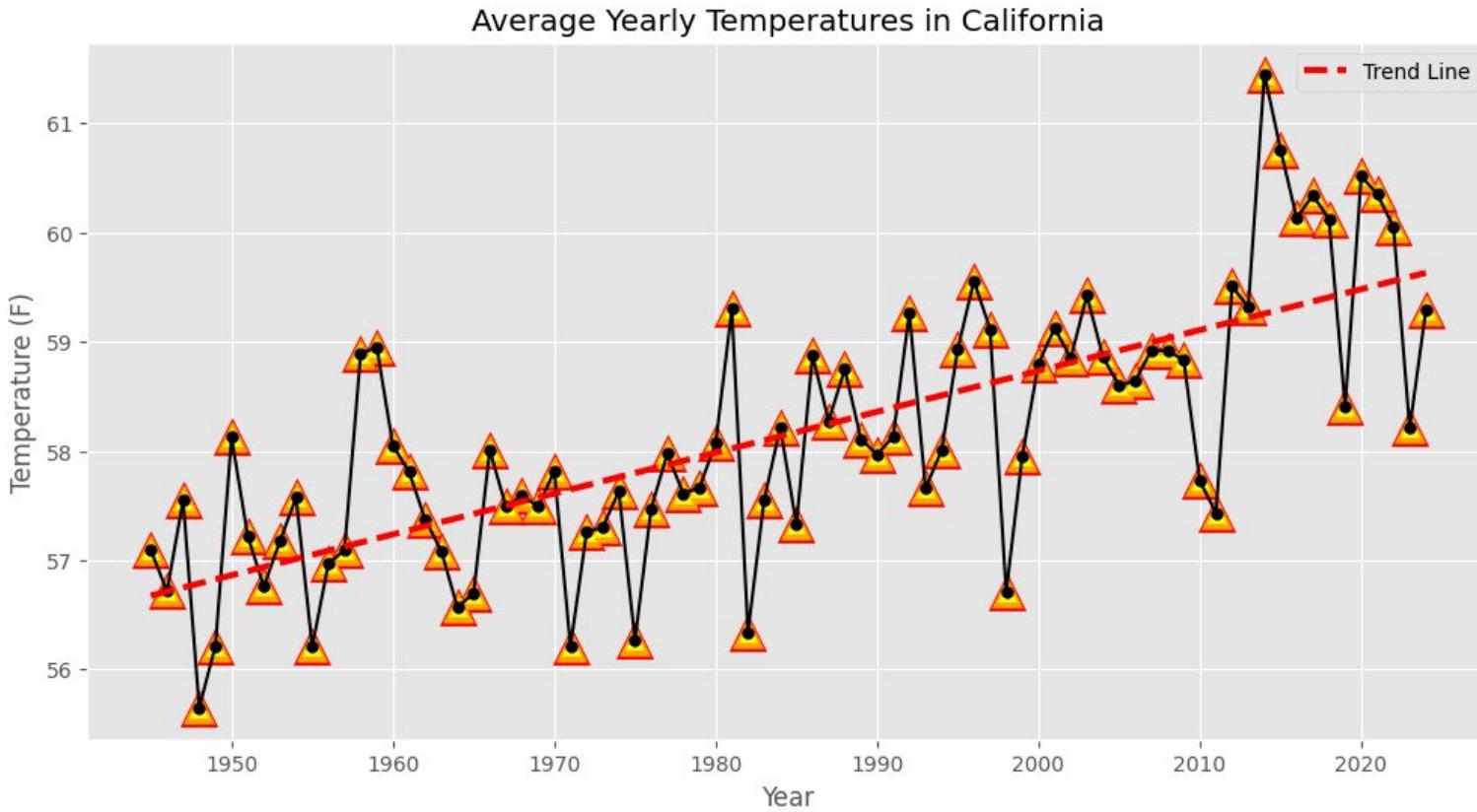
- geopandas, folium, ipython, ipywidgets, shapely, geodatasets, geopy, scipy

oi

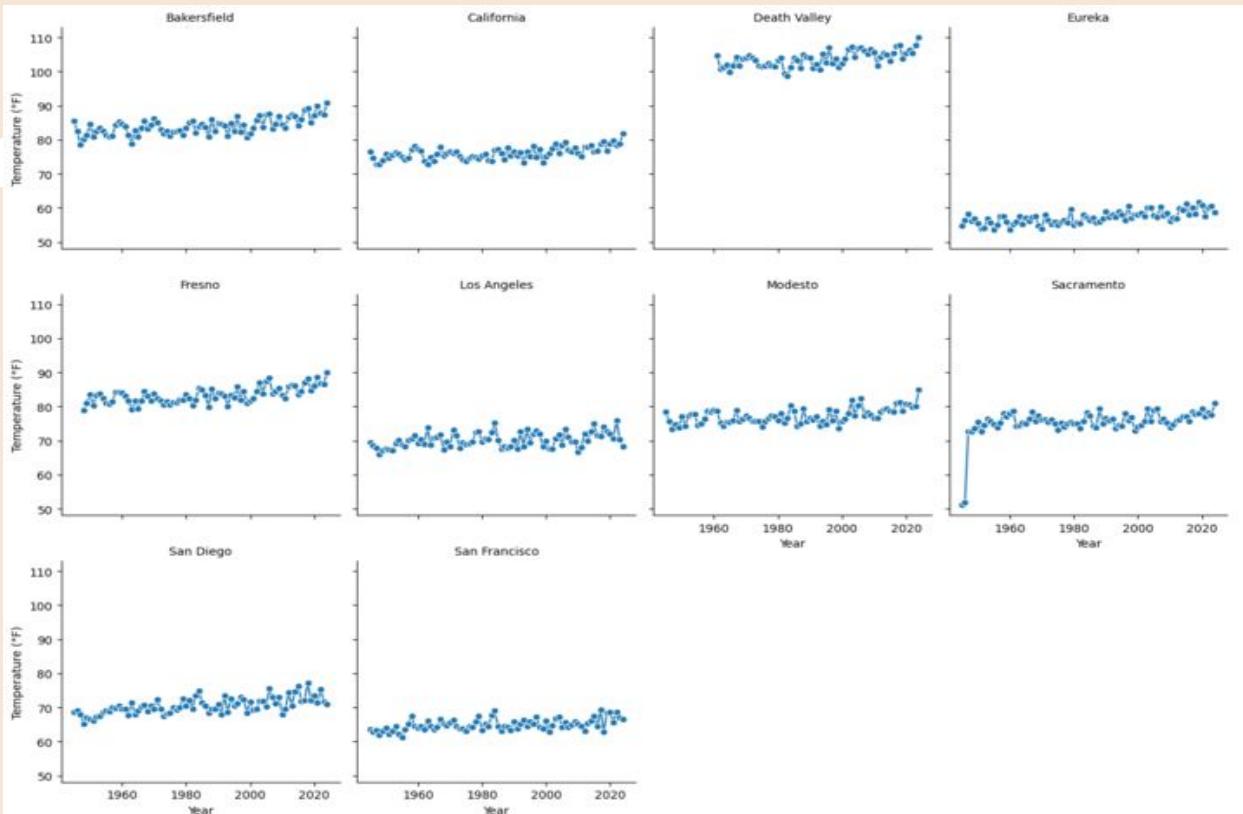
Temperature



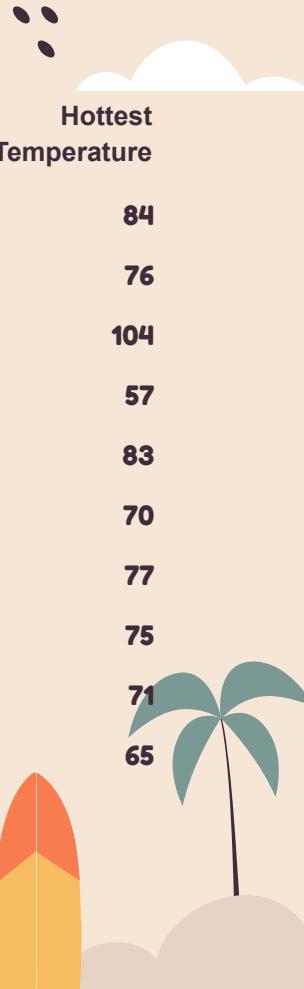
Average temperatures is increasing each year



Hottest temperatures also increasing by CA cities & year



City	Hottest Temperature
Bakersfield	84
California	76
Death Valley	104
Eureka	57
Fresno	83
Los Angeles	70
Modesto	77
Sacramento	75
San Diego	71
San Francisco	65



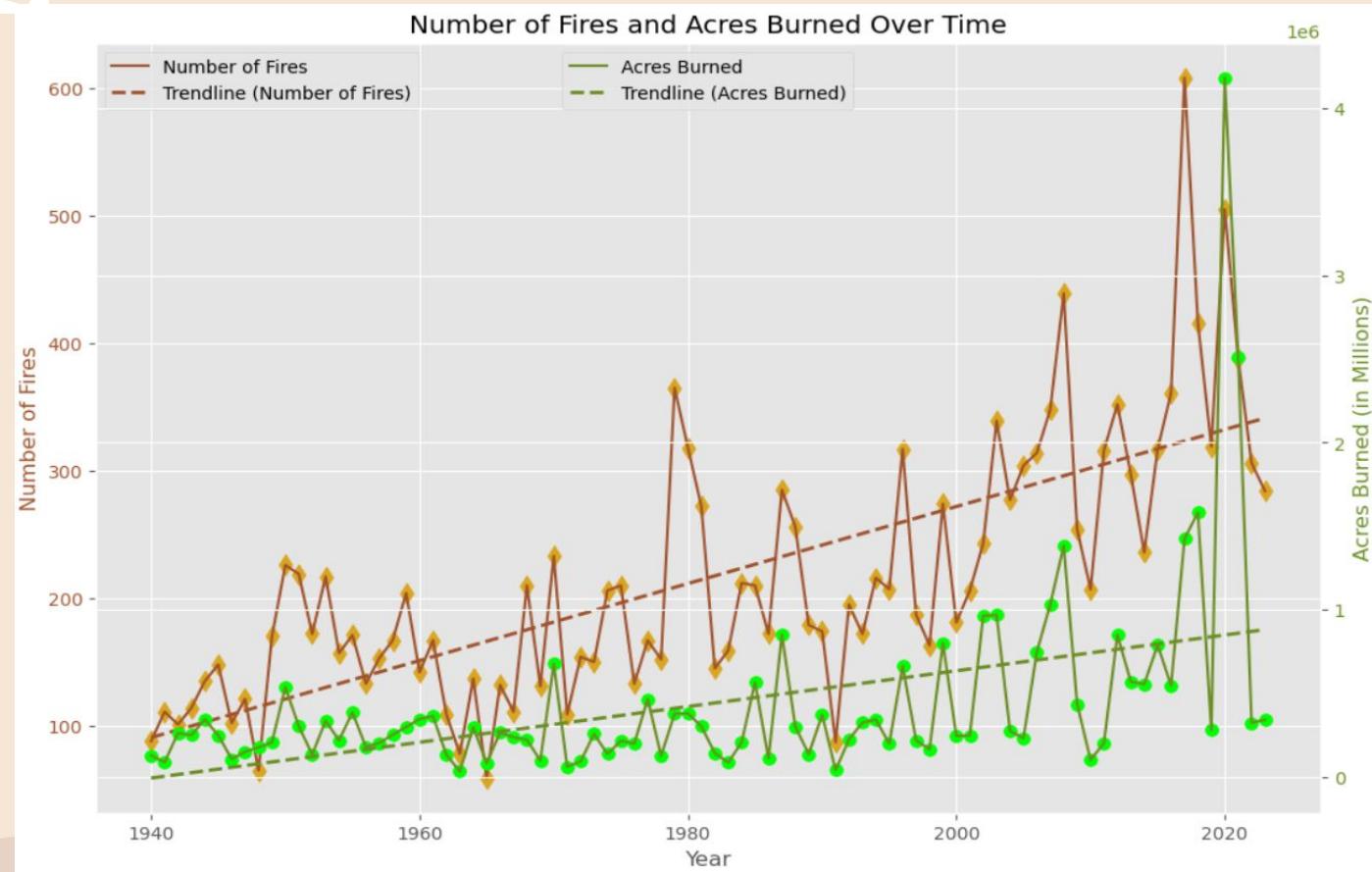


02

wildfire



Wildfires have increased over time



Top 10 fires by acres burned

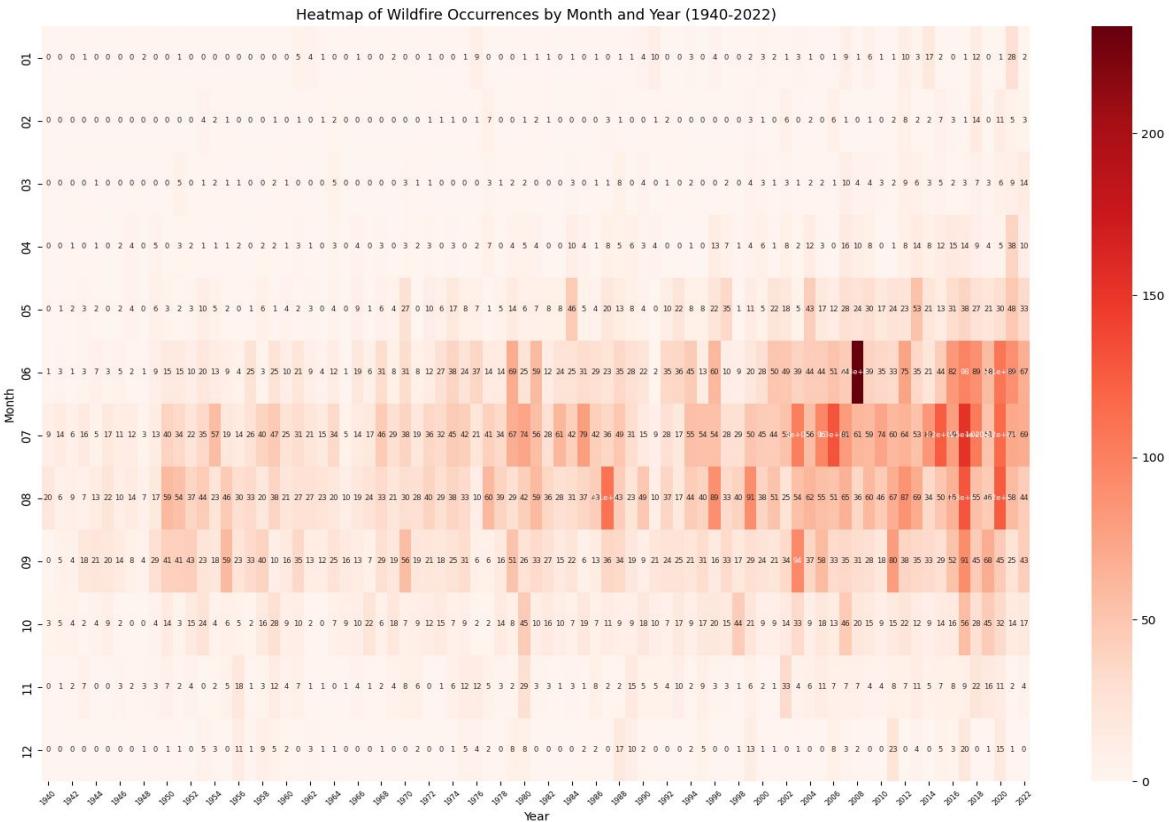
- August Complex (2020): 1M
- Dixie (2021): 1M
- Biscuit (2002): 0.5M
- Ranch (2018): 0.4M
- SCU Complex (2020): 0.4M
- Creek (2020): 0.4M
- North Complex (2020): 0.3M
- Rush (2012): 0.3M
- Hennessey (2020): 0.3M
- Thomas (2017): 0.3M



Increase in wildfire occurrences over summer months and beyond



Heatmap of Wildfire Occurrences by Month and Year (1940-2022)



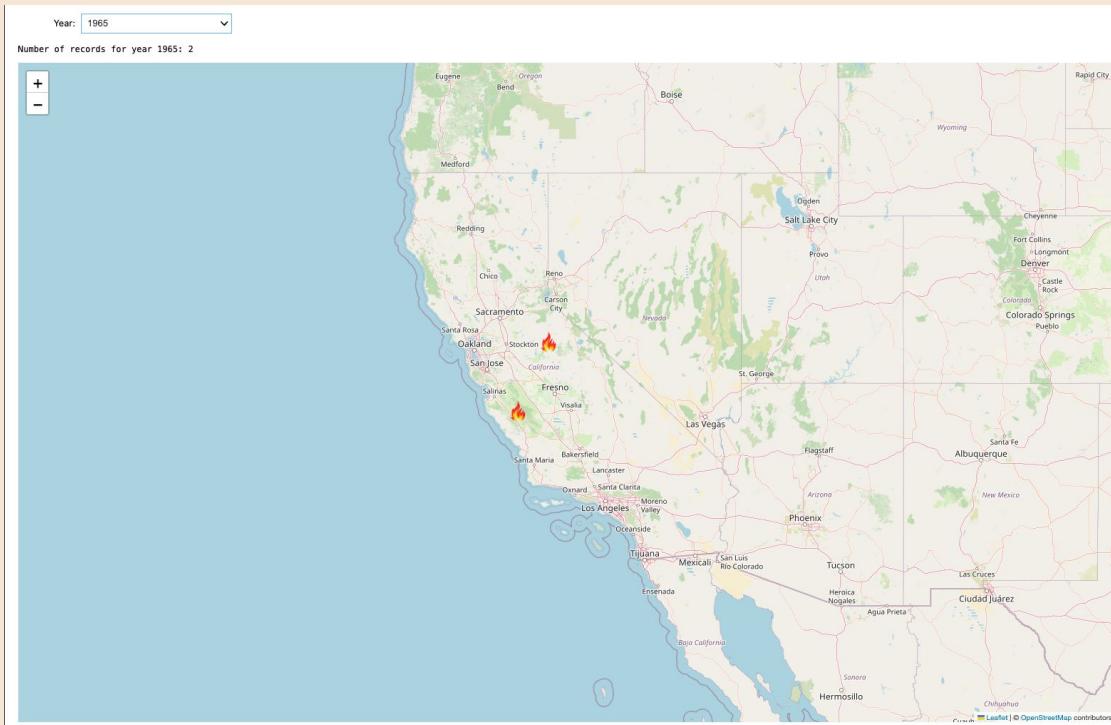
Increasing Wildfire Frequency Over Time

- Heatmap shows an increase in number of wildfires from 1940s onwards, with a concentration of activity in the last few decades.

Expansion of Fire Season

- Historically, fire season was primarily during late summer/early fall. However, recently fire season has lengthened, now spanning much of year.

Interactive wildfire map



- This interactive map shows how wildfire activity has varied over time, including geographic distribution, size and duration.
- By viewing map for different years, we see patterns such as **increases wildfire frequency, more concentration of large fires and longer fire duration** as year passes.



03

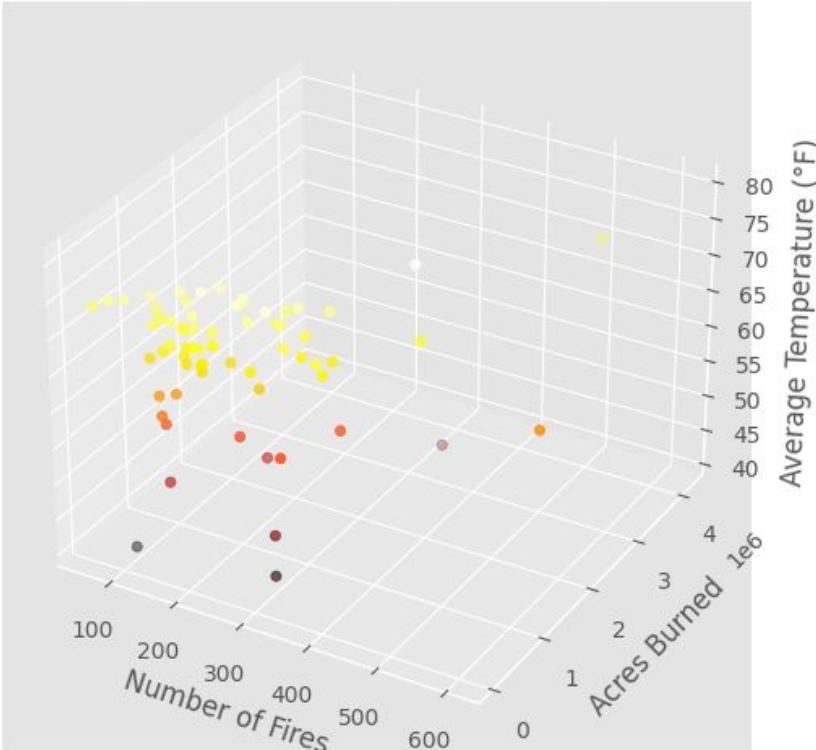
Temperature and wildfire



Higher temperatures are linked to increased wildfire activities



3D Scatter Plot: Fires, Acres Burned, and Temperature



Temperature & wildfire frequency & acres burned

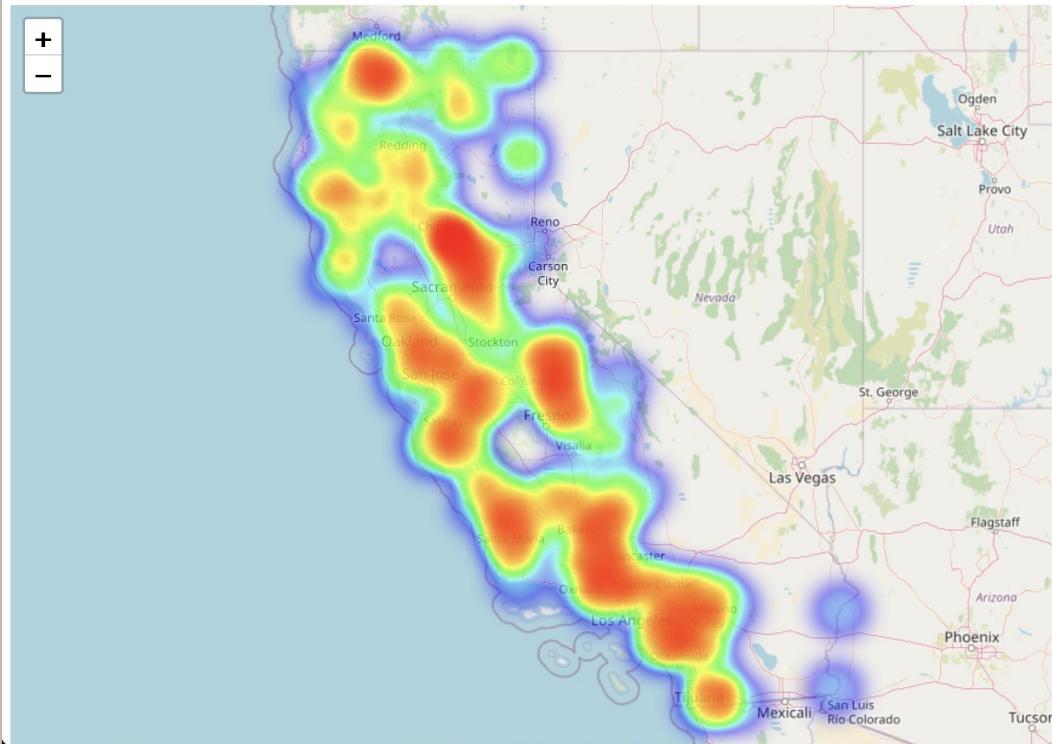
- Higher temperatures tend to cluster where there are more fires but not necessarily where the most acres are burned.
- Noticeable cluster where number of fires is relatively high but total acres burned is low to moderate. Those fires mostly align with lower temperatures.

Interactive wildfire & temperature heatmap



Wildfire Heatmap

Select Year: 2022.0



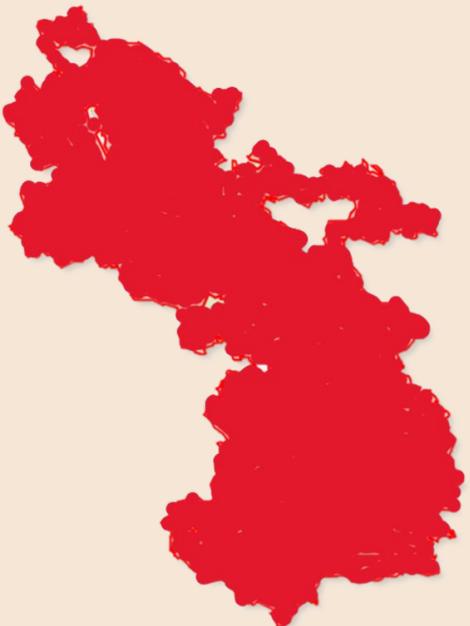
Correlation between higher temperatures and the frequency/severity of wildfire

- This heat map shows where wildfires occurred for a specific year. Each point represents latitude and longitude of a wildfire.
- Color intensity at each location is influenced by average temperature associated with that location. Higher temperatures contribute to stronger heatmap intensity.

Safeguard our earth against climate change

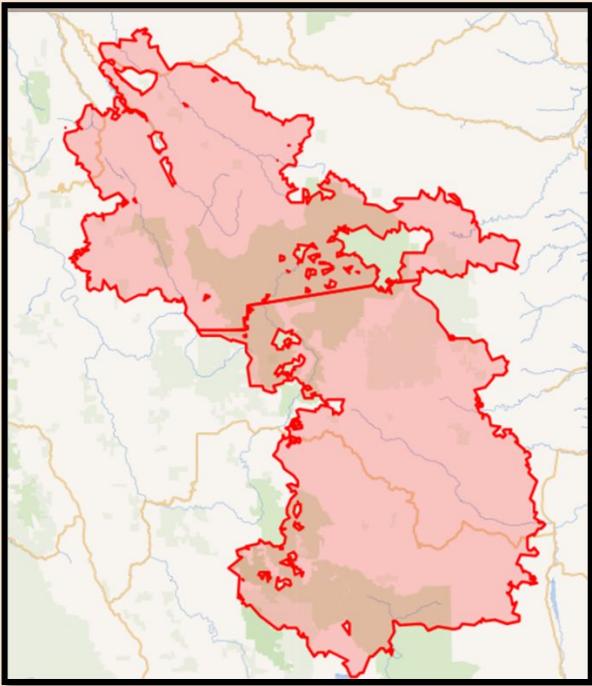


What do these images have in common?



What do these images have in common?

August Complex Fire 2020 -
1.6M square miles



Rhode Island (land + water) -
Total 1.5M square miles

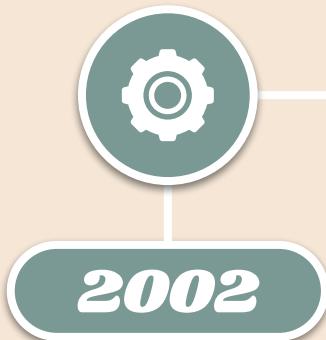




Thanks!

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Our evolution



Venus

Venus has a beautiful name



Mars

Mars is a very cold place



Mercury

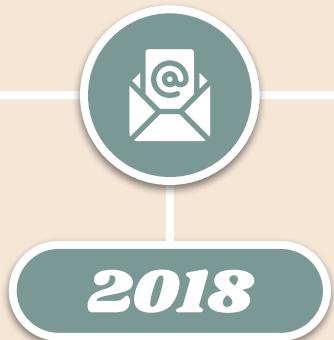
Mercury is the smallest planet



Neptune

Neptune is far away from us





Jupiter

Jupiter is the biggest planet



Saturn

Saturn has several rings

Our evolution





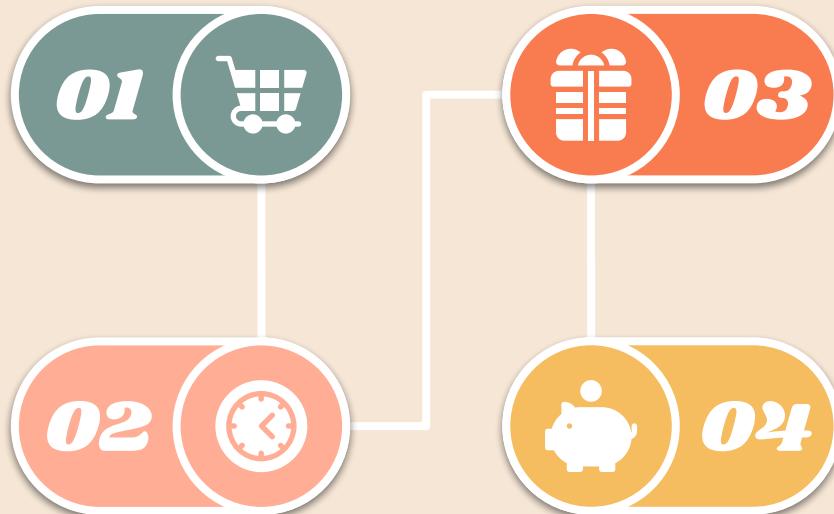
Guiding principles

Mercury

Mercury is the smallest planet

Mars

Mars is actually a cold place



Jupiter

Jupiter is the biggest planet

Neptune

Neptune is far away from Earth



Market share



3,800

Mercury

Mercury is a small planet

1,000

Mars

Mars is a cold place

2,900

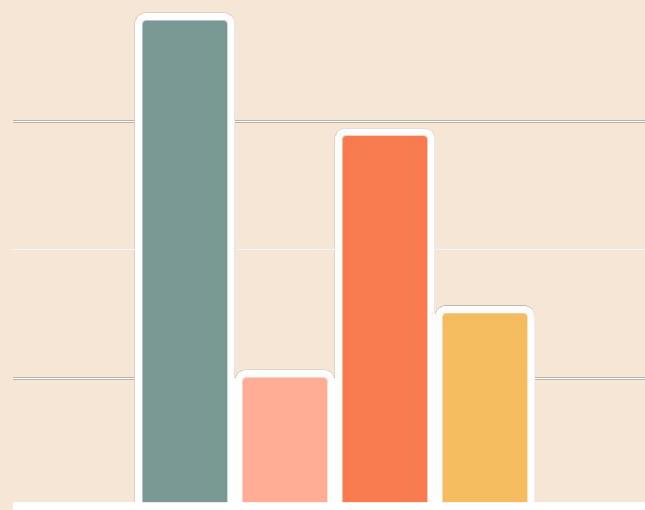
Jupiter

Jupiter is a gas giant

1,400

Neptune

Neptune is an ice giant



Follow the link in the graph to modify its data and then paste the new one here.

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Buyer persona profile



Gender



40%



60%



Age

20 - 40

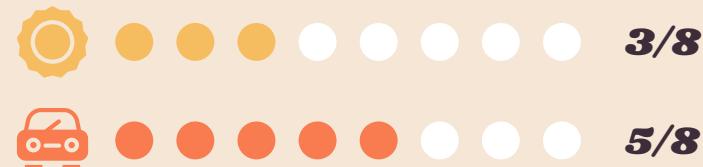
40 - 60



Interests

1	Women love mountains
2	Men like the beach

Trips



Buyer journey

01

Awareness

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

02

Consideration

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

03

Decision

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



Sales funnel



1st

Awareness

Mercury is very small



2nd

Interest

Mars is a cold place



3rd

Decision

Jupiter is a gas giant



4th

Purchase

Neptune is far away



Competitor analysis



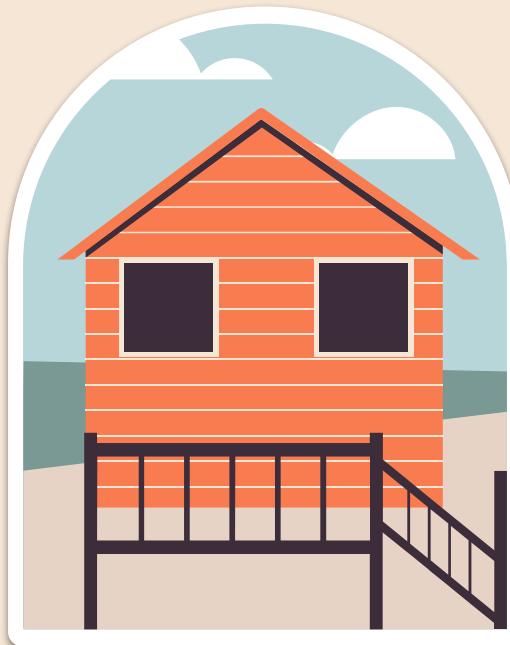
Mercury

It's the closest planet
to the Sun



Saturn

Saturn is a gas giant
with several rings



Neptune

It's the farthest
planet from the Sun



Mars

Despite being red,
Mars is a cold place





SWOT analysis

Weaknesses

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



Strengths

Jupiter is a gas giant and the biggest planet

Opportunities

Venus is the second planet from the Sun



Goals



Mercury

It's the closest planet from the Sun

Saturn is a gas giant with several rings

Saturn



Venus

Venus is the second planet from the Sun



Jupiter

Jupiter is the biggest planet of them all



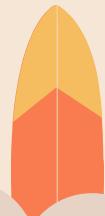
Neptune

It's the farthest planet from the Sun



Mars

Despite being red, Mars is a cold place



Strategy



Key action 1

Jupiter is a gas giant and the biggest planet



Venus

Venus has a very beautiful name

A

Mars

Mars is a very cold place

B

Key action 2

The Sun is the star at the center of the Solar System



Mercury

Mercury is the smallest planet

02

Neptune

Neptune is far away from us

C

D



Key action items

	<i>1st quarter</i>	<i>2nd quarter</i>
<i>Key action 1</i>	You can describe your items for the quarter here	You can describe your items for the quarter here
<i>Key action 2</i>	You can describe your here items for the quarter	You can describe your items for the quarter here
<i>Key action 3</i>	You can describe your items for the quarter here	You can describe your items for the quarter here

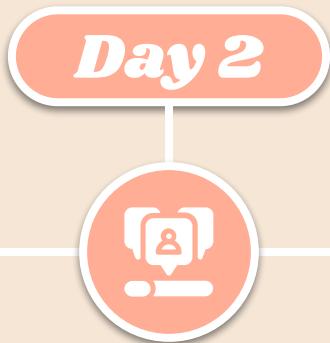


Timeline



Venus

Venus has a beautiful name



Mars

Mars is a very cold place



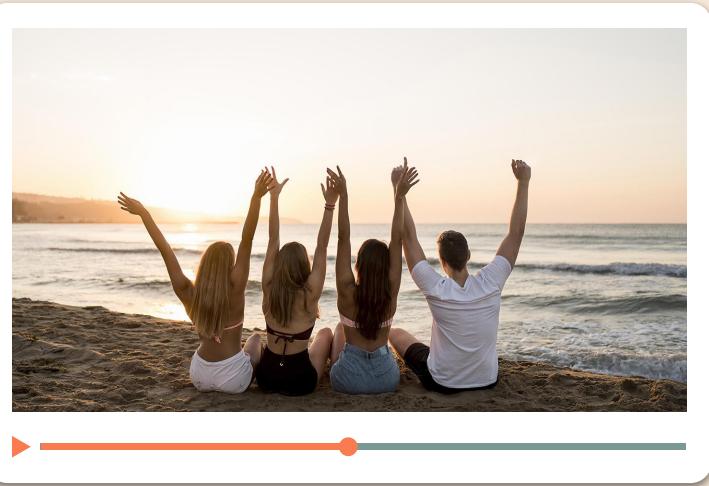
Mercury

Mercury is the smallest planet



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Awesome words



*A picture is
worth a
thousand
words*





A picture reinforces the concept

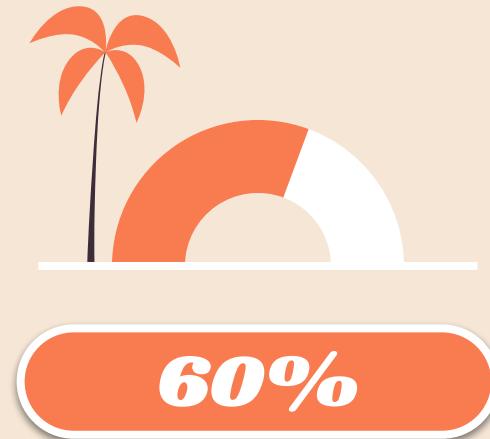
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Quarterly budget



Mercury

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



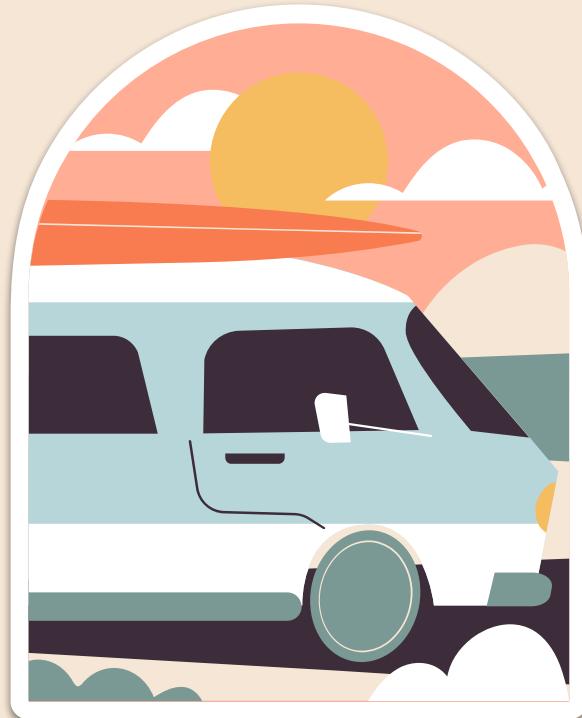
Venus

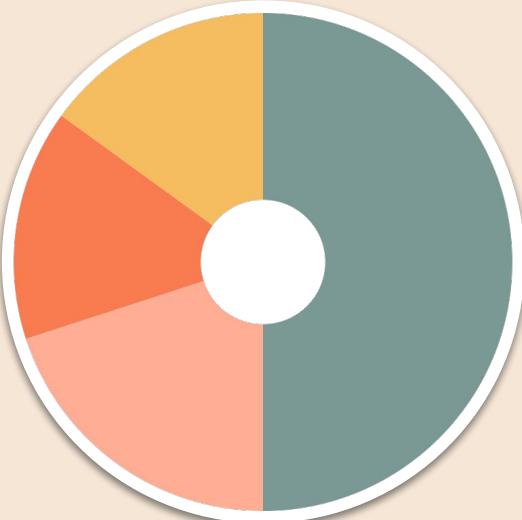
Venus is the second planet from the Sun



\$44,890

Big numbers catch your
audience's attention





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

Compliance rate

50%

Mercury

Mercury is the smallest planet

15%

Jupiter

Jupiter is a gas giant planet

20%

Mars

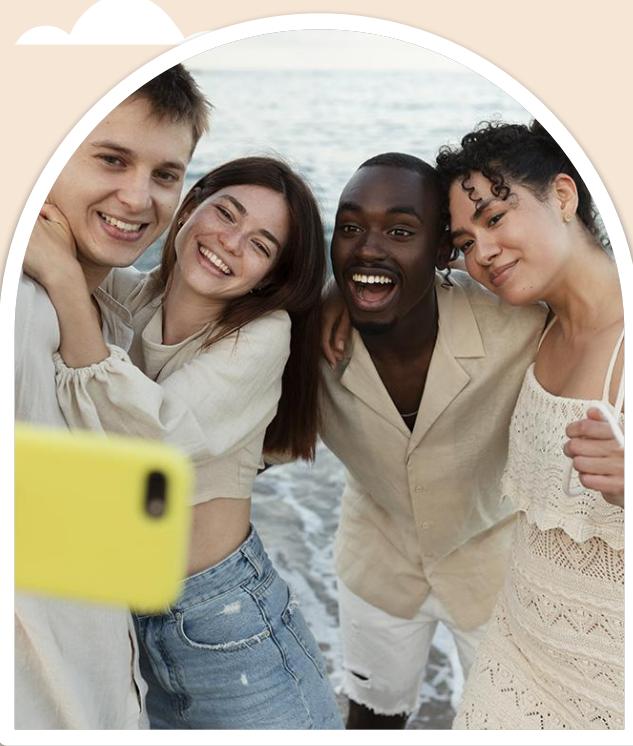
Mars is actually a cold place

15%

Neptune

Neptune is far away from Earth





Our team

Marketers

- Emma Mayer
- Chris Johnson

Art direction

- Zoe Smith
- Bruno Sato



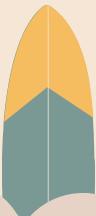


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- Flat design california summer vacation stickers set I
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Photos

- Woman on beach making v sign
- Couple relaxing on beach
- Back view four friends holding your hands up
- Three best friends together smiling on the beach
- Close up friends taking selfie

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Pana



Amico



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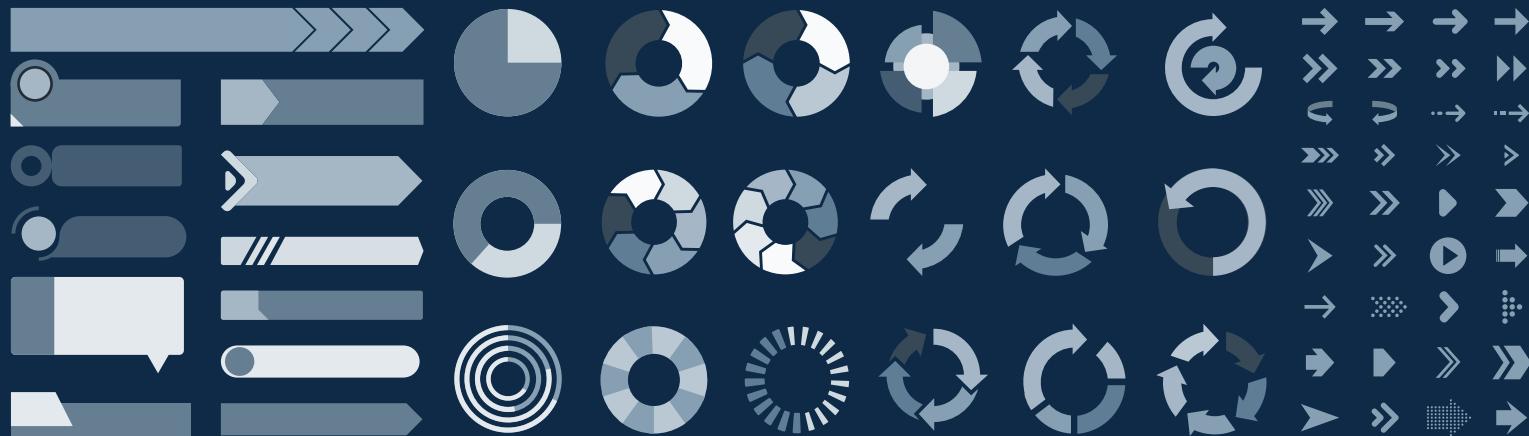
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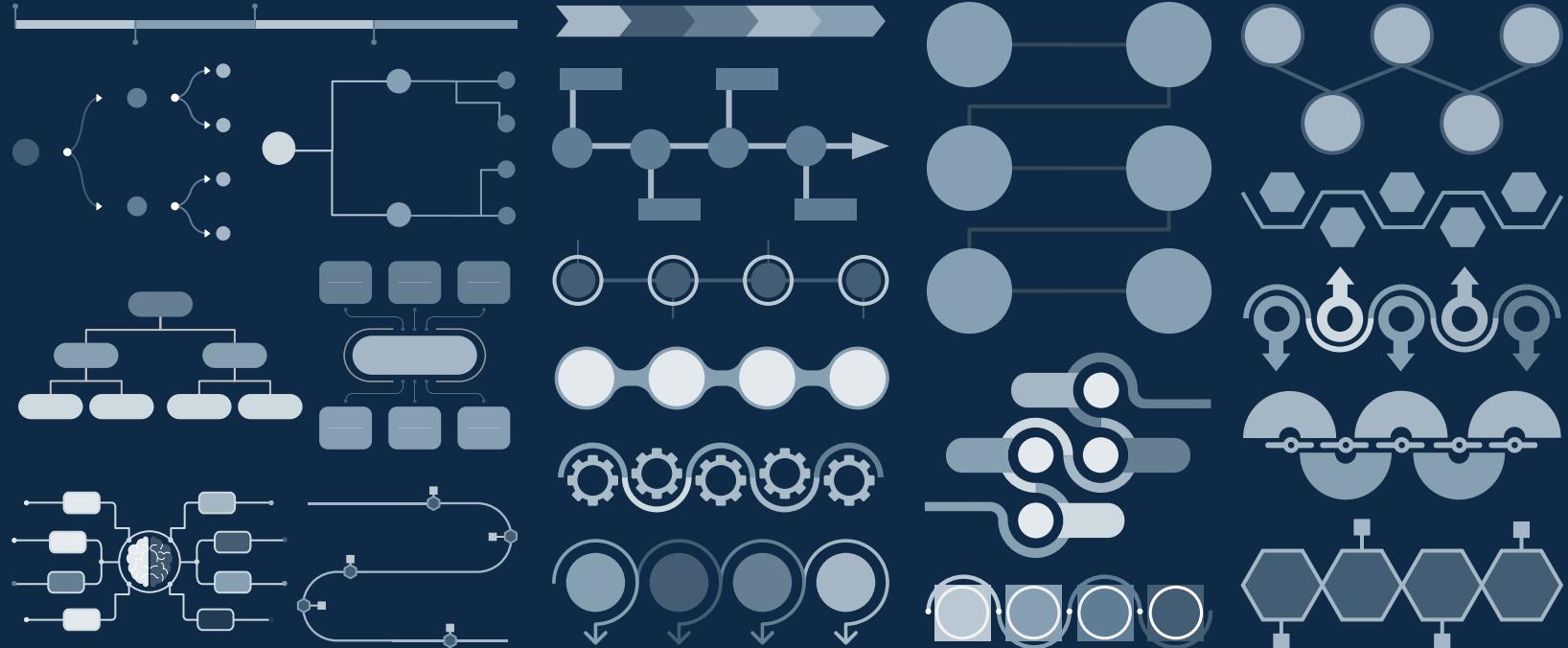
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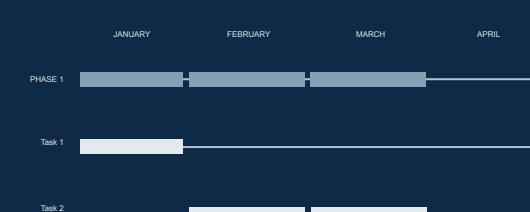
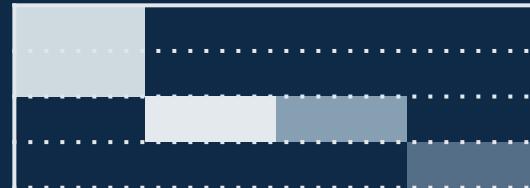
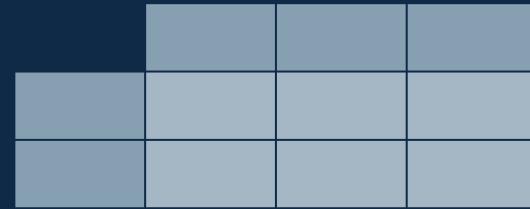
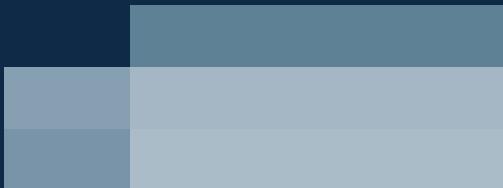
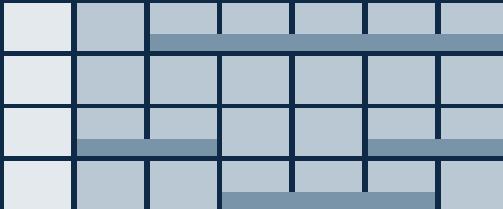
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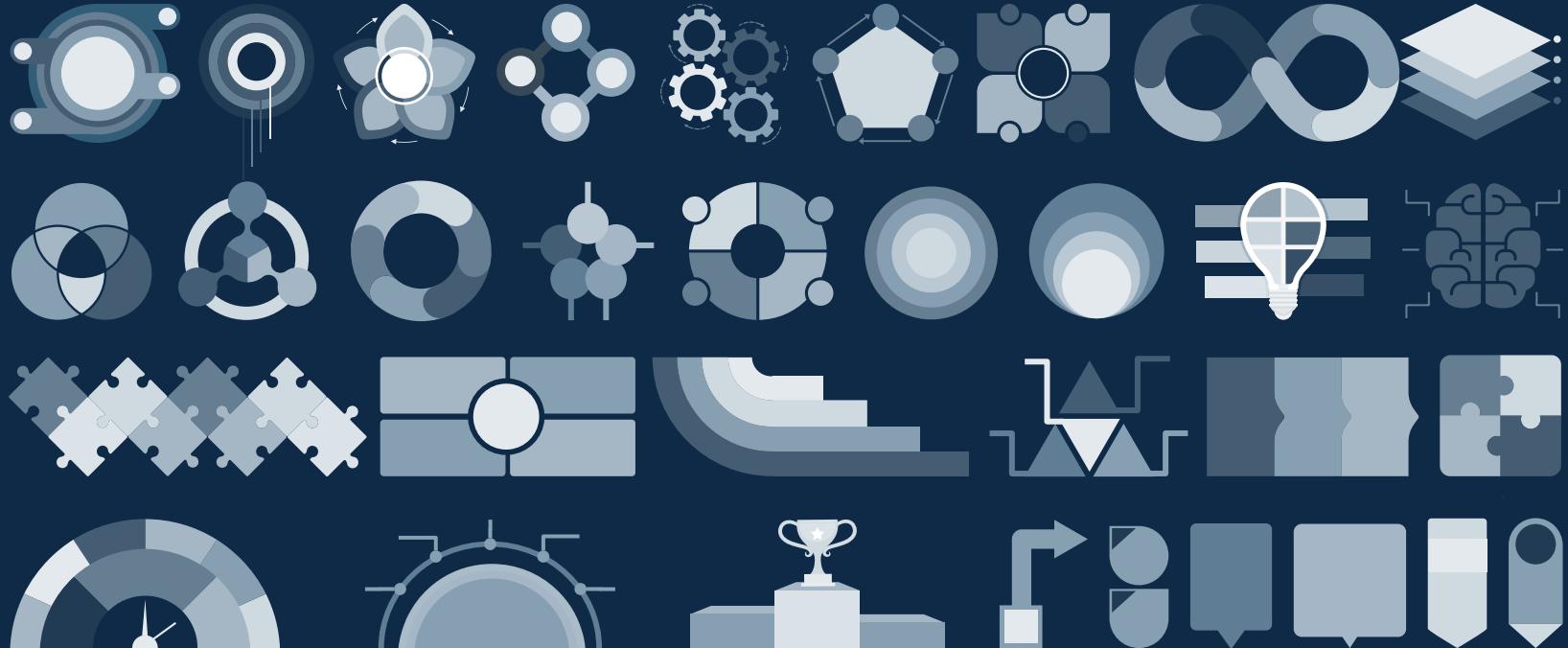
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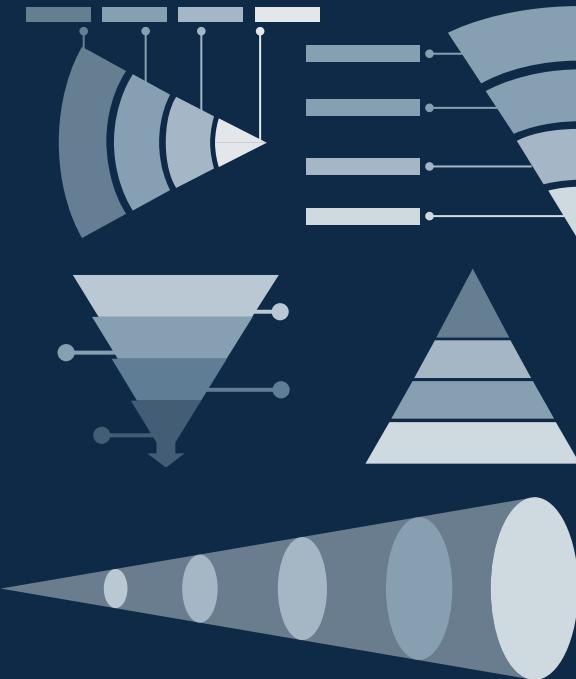
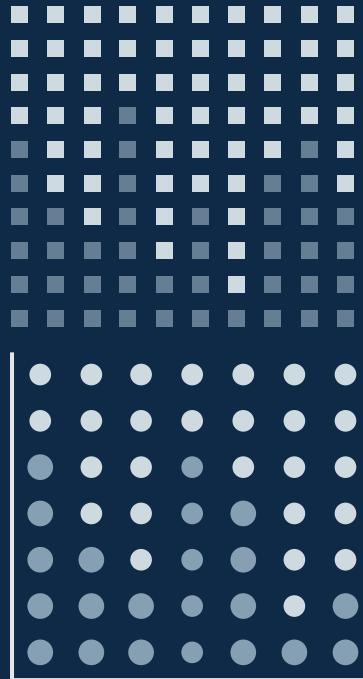












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