

Abstract geometric lines in black on a white background, forming various overlapping polygons and shapes, primarily concentrated on the left side of the page.

# ANALYZING COVID-19: A DATA-DRIVEN JOURNEY THROUGH THE PANDEMIC

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# AGENDA

Problem Statement

Motivation

Approach

Research Question

Result

Future Work

# PROBLEM STATEMENT

- Major global health and financial crises have been brought on by the COVID-19 pandemic.
- Making informed decisions about policy requires knowledge of the virus's impact and distribution.
- To describe COVID-19 patterns, data-driven insights are required.



# MOTIVATION

- One of the most severe recent worldwide health problems is the COVID-19 pandemic.
- As the pandemic progresses, huge quantities of COVID-19 data are being gathered everyday.
- Understanding how this data affects global health requires analysis and visualization.



# APPROACH

- Data manipulation and analysis on COVID-19 datasets were done using Python.
- Five different datasets in total were used.
- Techniques: geographical analysis, exploratory analysis, statistical modeling.
- Focused on spotting trends and patterns in:
  1. Spread and transmission
  2. Impacts on health

Q1 \_\_\_\_\_ What was the overall spread across the globe?

Q2 \_\_\_\_\_ Did weather have any impact on the number of confirmed Covid-19 cases?

Q3 \_\_\_\_\_ Does age play an important role in Covid-19?

Q4 \_\_\_\_\_ Has there been any variation or evolution in the symptoms of COVID-19 over time?

## RESEARCH QUESTION

# RESULT

[https://colab.research.google.com/drive/1gGnq62YcLX8LNsZHK\\_6jKoyW8HIEvCDu?usp=sharing](https://colab.research.google.com/drive/1gGnq62YcLX8LNsZHK_6jKoyW8HIEvCDu?usp=sharing)



## FUTURE WORK

- Regression, clustering, and neural networks are examples of advanced models.
- Real-time monitoring and forecasting should be operationalized.



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# THANK YOU