PROJECT PROPOSAL

TEAM DETAILS

Team	*Details*
TEAM NAME	**GEN Z**
COLLEGE NAME	**SARANTHAN COLLEGE OF ENGINEERING**
FACULTY MENTOR NAME	**MS.A.KAYAL**
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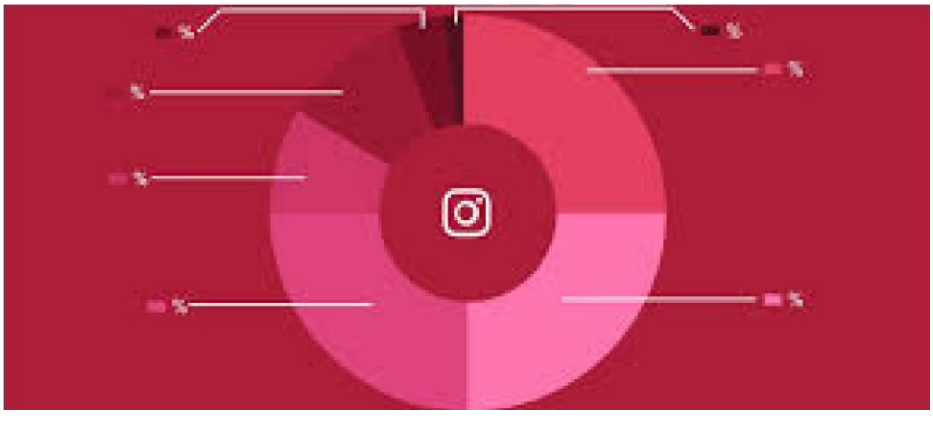
INTRODUCTION

Project Theme and Title

SOCIAL NETWORK ANALYSIS IN DATA SCIENCE

Social Network Analysis (SNA) is a branch of data science that focuses on studying social relationships between individuals or groups. It aims to understand how people interact, communicate, and exchange information within a given network. SNA uses mathematical and statistical techniques to analyze and visualize social networks, identifying patterns, trends, and insights that are not visible to the naked eye.

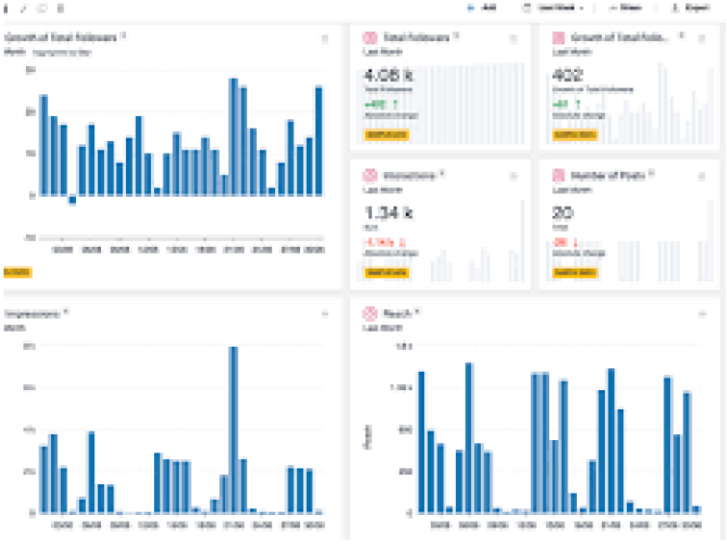


Harnessing the power of data science to analyze social networks offers a unique opportunity to uncover hidden patterns and insights in human interactions, providing valuable knowledge for decision-making and research in the digital age.

PROBLEM AND SOLUTION:

The problem addressed in the code is analyzing the popularity of the keyword "instagram" using Google Trends data.

The proposed solution involves fetching and visualizing regional and temporal interest in "instagram" through bar charts and time series graphs, respectively.



SIGNIFICANCE:

This problem deserves attention due to its significance in understanding the public's interest and engagement with online content platforms like YouTube. Analyzing regional and temporal trends in Google searches for "instagram" can provide valuable insights for content creators,

marketers, and researchers, helping them tailor their strategies and better comprehend evolving user behaviors in the digital age.

PROJECT DETAILS

Project Phase	*Task*
Description of project environment	*Project Environment for Analyzing Google Trends Data*

Languages and Stacks:

- *Python is the primary language, while PyTrends is used to fetch Google Trends data.*

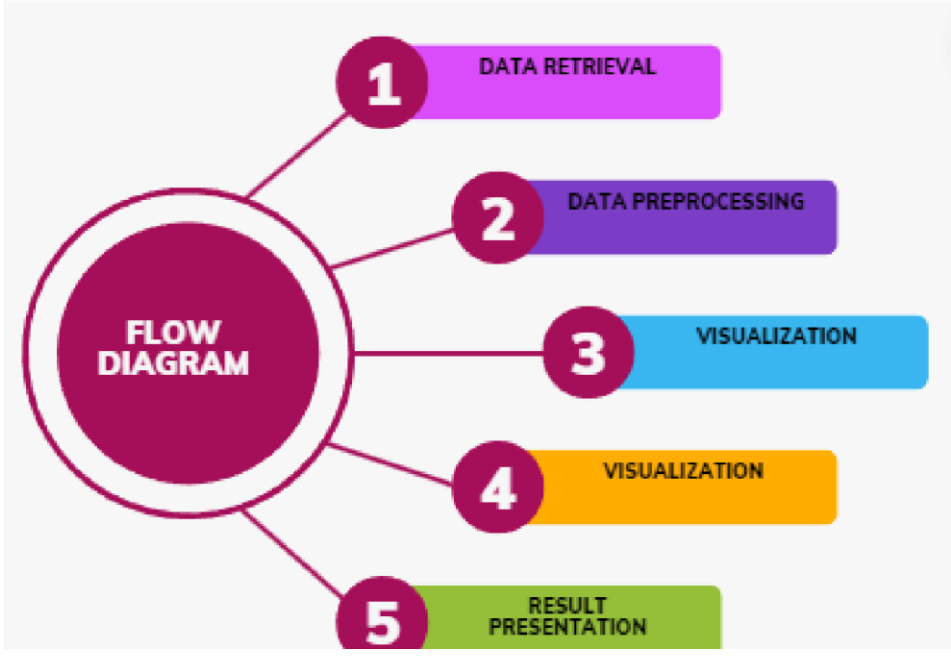
Software:

- *Pandas is employed for data manipulation, Matplotlib for visualization, and Jupyter Notebook for interactive coding.* - *Google Trends serves as the data source, and PyTrends interacts with it.*

Hardware:

- *A standard laptop/desktop with a multi-core processor, 8 GB+ RAM, adequate storage, and a basic graphics card is typically sufficient for this data analysis project*

FLOW DIAGRAM



TECHNOLOGIES USED

- *Languages: Python for data retrieval, preprocessing, and visualization.*
- *Libraries: PyTrends for accessing Google Trends data, Pandas for data manipulation, and Matplotlib for creating visualizations.*
- *Development Environment: Jupyter Notebook for interactive coding and documentation*

Key Features of the Proposed Solution:	*This project stands out for its accessibility, customization, and interactivity, offering users the flexibility to analyze Google Trends data with Python while serving as an educational resource, setting it apart from other existing solutions.*
	Key Features of the Proposed Solution: *Customized Analysis: Users can tailor their analysis by selecting keywords of interest, enabling versatile data exploration.* *Interactive Visualization: The solution empowers users with interactive data visualization tools, facilitating trend analysis and meaningful insights generation*
	Add task here

CONCLUSION

Problem Faced: ***The challenge of deciphering trends in Google searches for specific keywords like "instagram" presented a significant data analysis obstacle.***

Summary of the Project: *Our project successfully addressed this challenge by developing a Python-based solution that not only enabled users to tailor their keyword analysis but also provided interactive data visualization tools. Moreover, it served as a valuable educational resource for data analysts and researchers. In conclusion, this project offered an accessible and versatile approach to gaining insights into keyword popularity and trends, contributing to a more data-informed decision-making process.*

REFERENCES

1. *Using Google Trends for Book Marketing by: Jenifer Thompson*
2. *Google Trends the Ultimate Step-By-Step Guide by: Gerardus Blokdyk*
3. Artificial Intelligence: Structures and Strategies for Complex Problem Solving" by George F. Luger. This book explores AI concepts and problem-solving techniques in depth.
4. Machine Learning: A Probabilistic Perspective" by Kevin P. Murphy This book takes a probabilistic approach to machine

learning and covers a wide range of topics in the field.

5. Artificial Intelligence: Foundations of Computational Agents" by David L. Poole and Alan K. Mackworth This book is available for free online and offers a comprehensive introduction to AI concepts and methods
6. Pattern Recognition and Machine Learning" by Christopher M. Bishop

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