



# Telling a Story with Research Networks

Robert Pilgrim  
University of Arkansas

Associate Director for Data Strategy & Insights  
Division of Research & Innovation

[rpilgrim@uark.edu](mailto:rpilgrim@uark.edu)



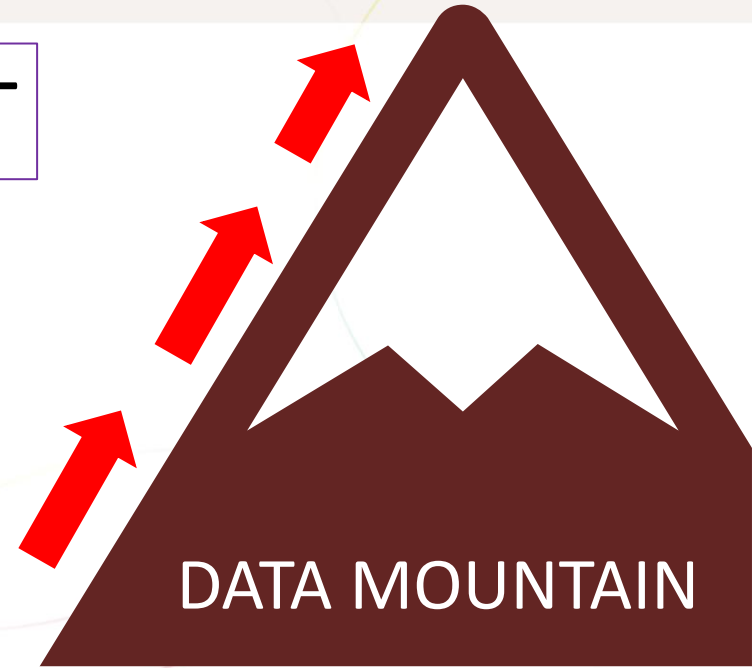


# Overview

Chat-GPT

Network Applications

Visualizing your  
Research Networks





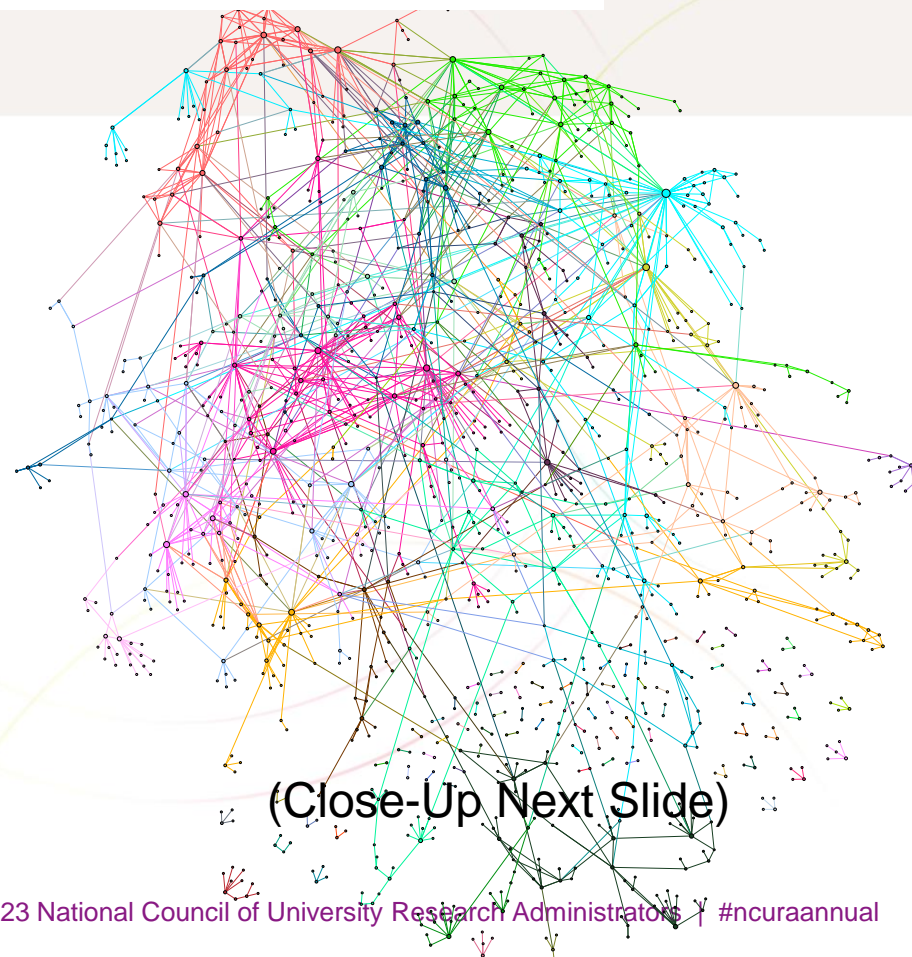
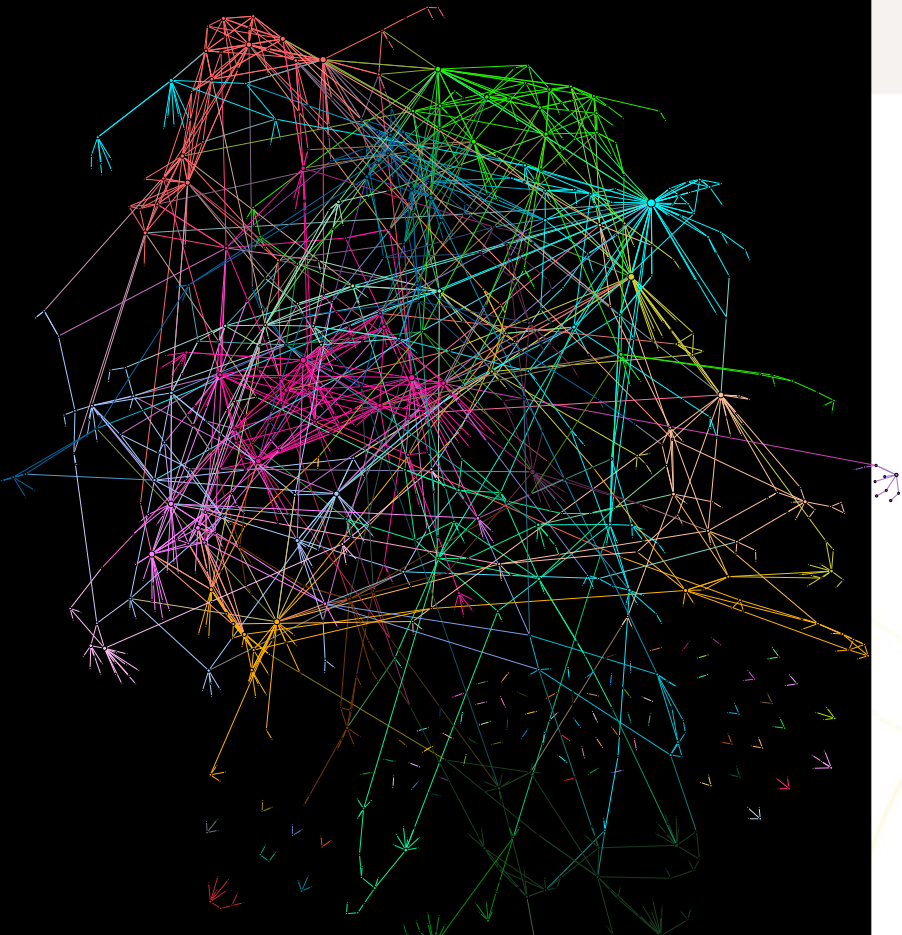
# What is a Research Network

## Overview

- List all research faculty on Post-it Notes
- Join PI-COI by a line
- The more lines connecting the same people, the closer the post-it notes
- Let's look at an example

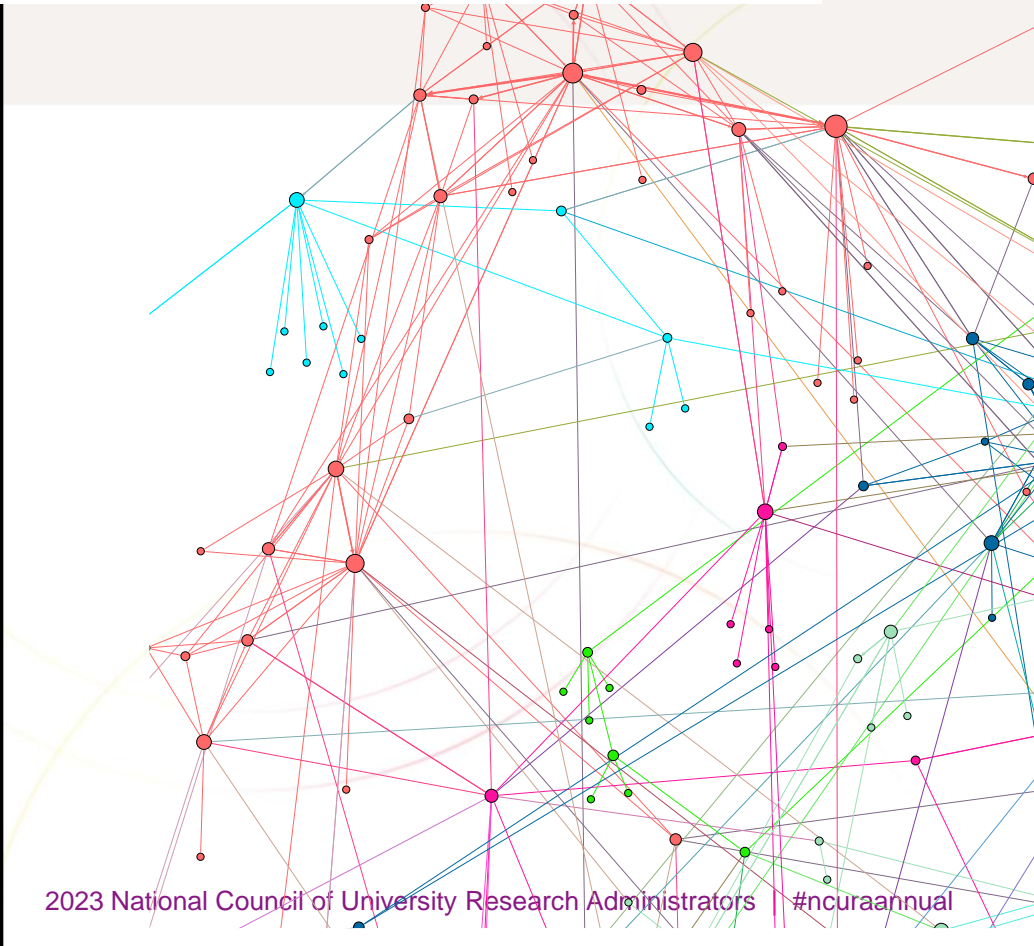
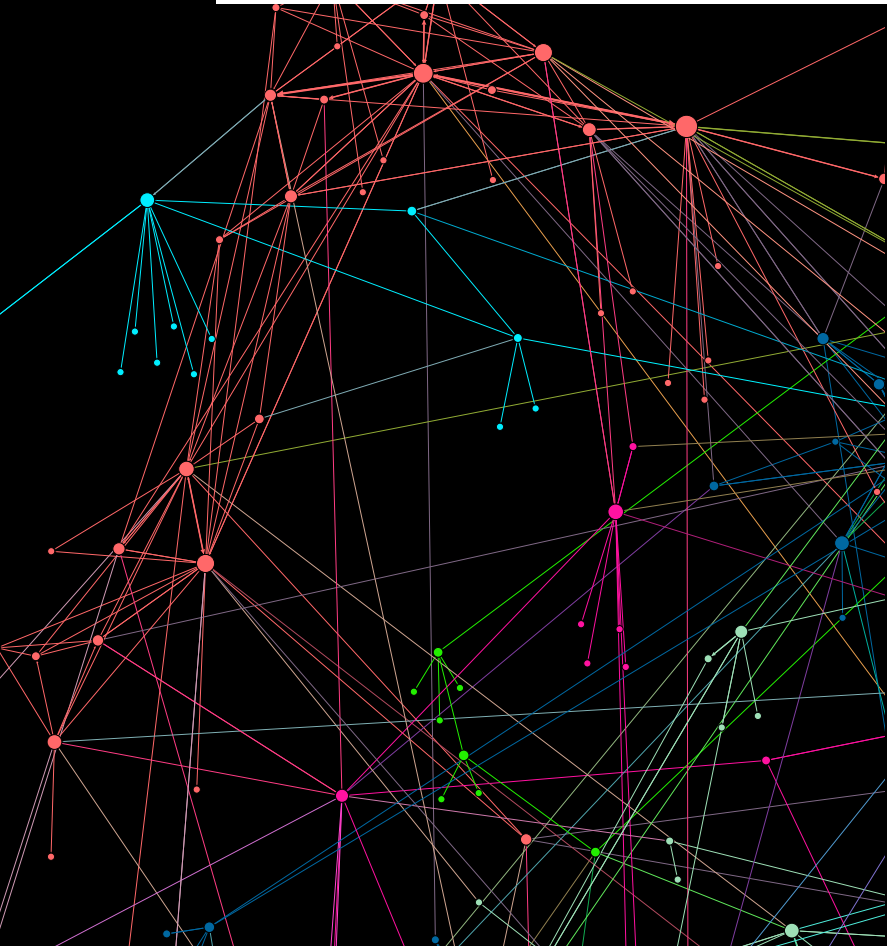


# Example Campus Award Network



(Close-Up Next Slide)

# Example Campus Award Network (Close-Up)





# What Story is your Network Data Telling You?

**Start:** What was research “like”

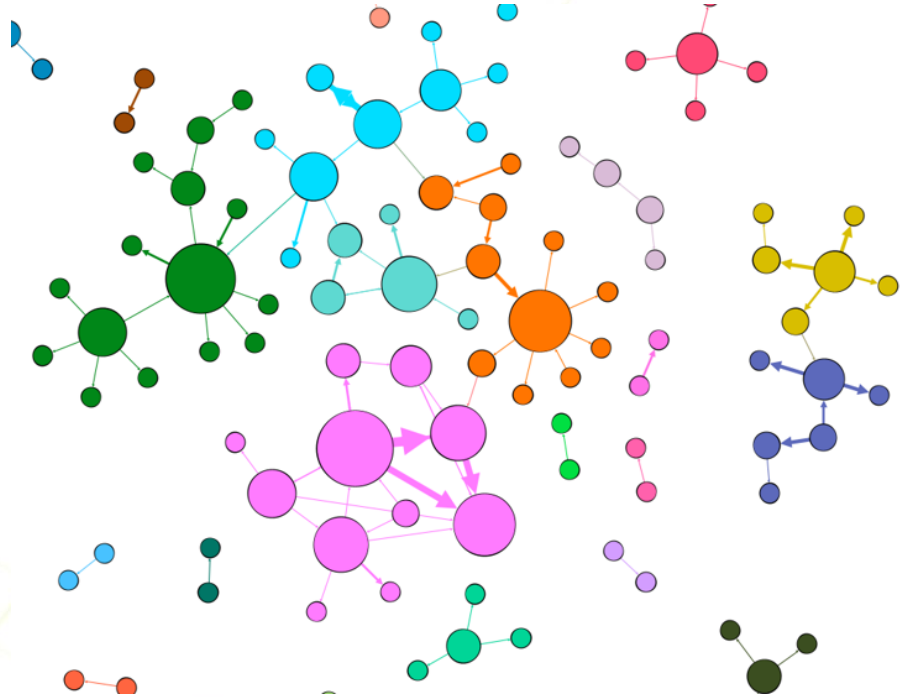
**Middle:** What happened (e.g., Creation of a research development office, strategic hires.)

**End:** What is it “like” now

## 5 Years Ago

- How would you describe this?

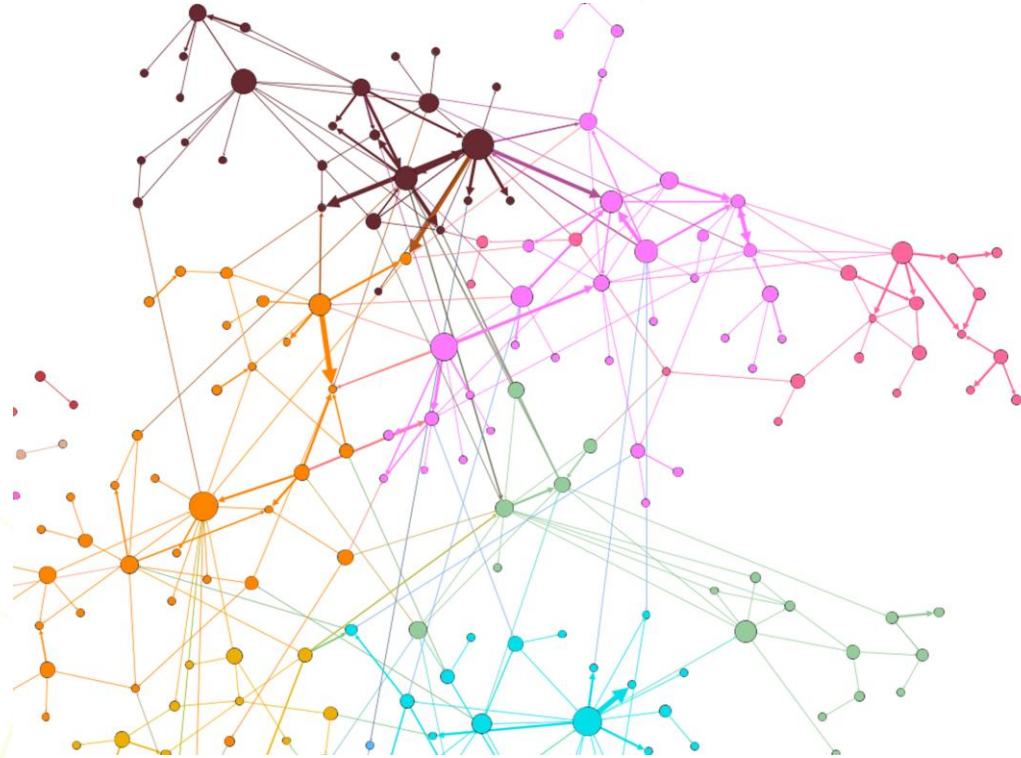
(Hypothetical Network)



## Today

- How would you describe this?

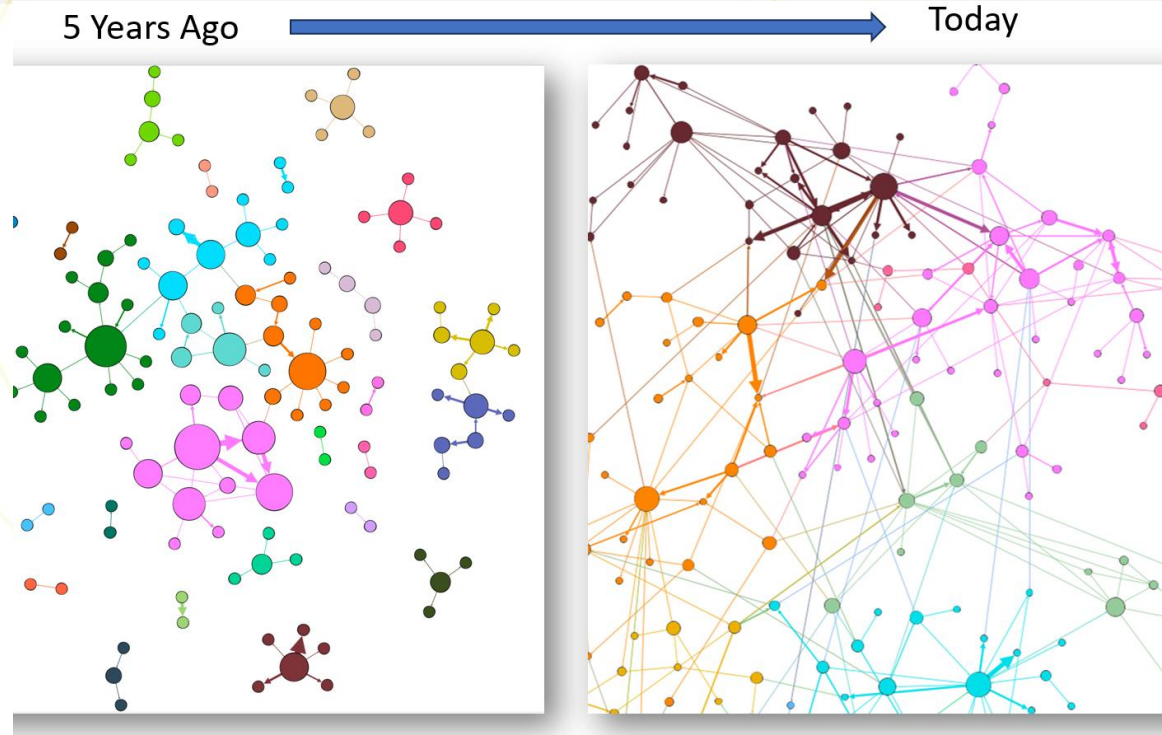
(Hypothetical Network)



# Change in NSF Proposal Collaborations

- Density Increased
- Which is more “resilient?”
- Decrease in group isolation

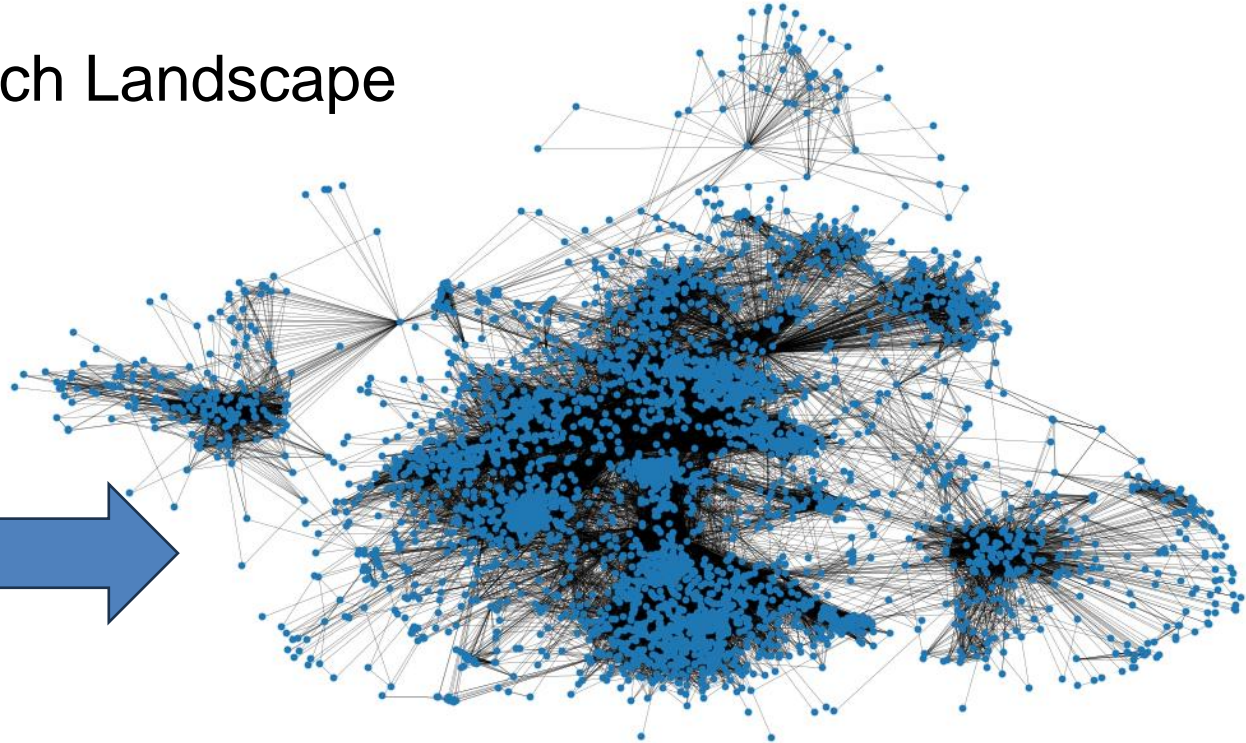
(Hypothetical Network)





# Research Administrator Leveraging Networks

- Understand Research Landscape
- New Employee
- Starting a new job





# Sponsored Research Leadership Leveraging Networks

- Interdisciplinary proposals?
- Are these more complex?
- Junior faculty
- Staff turnover, who do they work with?





# Strategic Initiatives Leveraging Networks

- New Building
- Innovation Fund
- Strategic Hires





# Other Applications Leveraging Networks

- Research Development
- Faculty Start-Up Funding
- Diversity Analysis





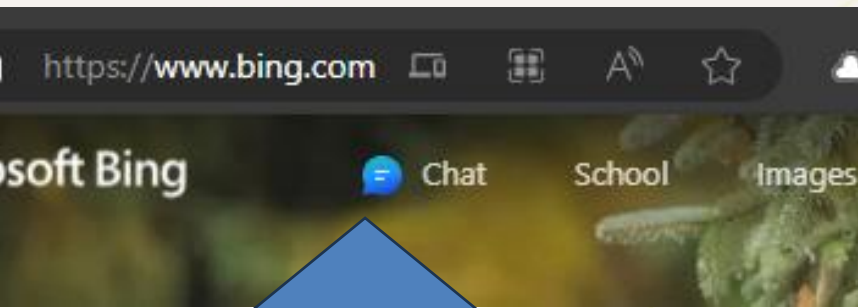
# ChatGPT



# ChatGPT 101

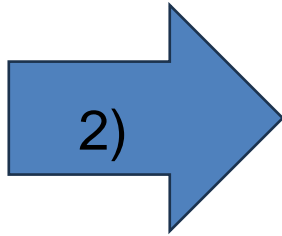
- A personal consultant
- Quality of answer depend on quality of the questions
- How can it help you?





1)

bing.com Click  
"Chat"

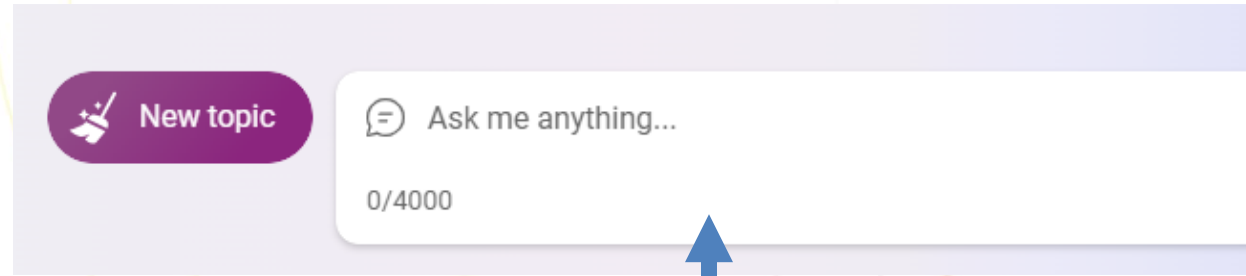


2)

I am a [JOB TITLE HERE] at a university, how can chatgpt help me in my job

# Bing ChatGPT

*Try it now*





# Putting ChatGPT to Work

Type this into Chat-GPT

*"I have these variable from my sponsored research award data:*


*Award Number, Title, Sponsor, Principal Investigator Name, and Co-Investigator Name.*

*Please give me the description of 4 data visualizations describe them, and the potential insights."*





# Basic Response

- **Bar Chart** 
- Pie Chart
- Network Diagram
- Word Cloud

- **Description**
  - A simple bar chart that displays the number of awards per principal investigator. The x-axis will have the principal investigator names and the y-axis will have the number of awards. Each bar in the chart will represent a principal investigator.
- **Potential Insights:**
  - This can show who has received the most awards, which could point to who is most active in research or who is best at securing funding. It can also show if awards are concentrated among a small group of researchers or if they are spread out among many.



# Modifying the Response

Type this into Chat-GPT

“Please make your previous response more in-depth”





# In-Depth Response Interactive Scatterplot

## Description

- Interactive scatterplot
- x-axis number of awards on the
- y-axis number of unique co-investigators
- Each point represents a principal investigator.

## Potential Insights

- Shows reveal relationships between the amount of funding and collaborations.
- For example, it might show that investigators with more co-investigators tend to have more awards, suggesting the importance of collaboration in winning awards.



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