

SNS COLLEGE OF TECHNOLOGY



An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A’ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Department of Computer Science and Engineering

Course Code & Title : 23AD0201 - Data Science Fundamentals

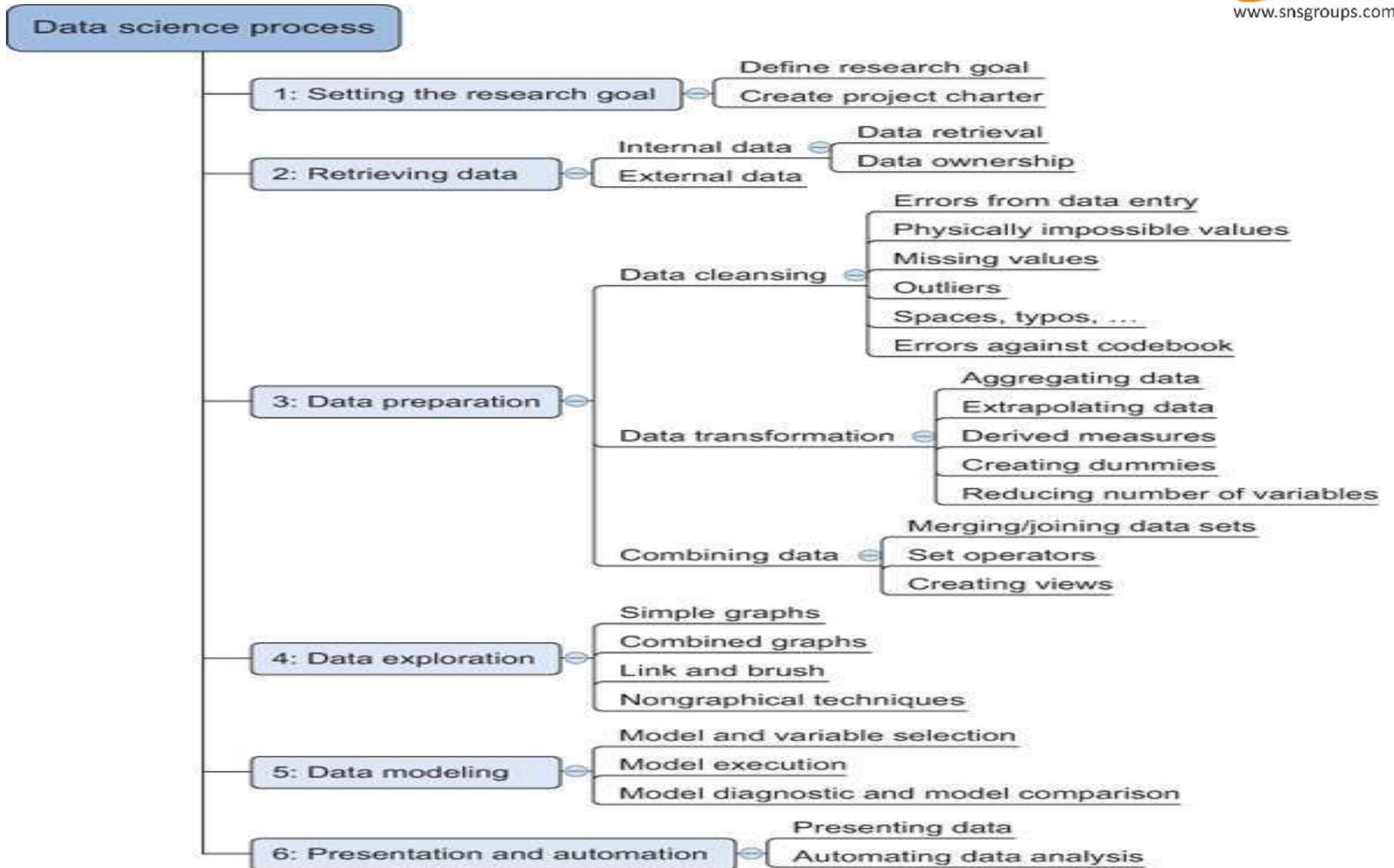
III YEAR / VI SEMESTER - EEE

Unit 1 - INTRODUCTION TO DATA SCIENCE

Topic : Setting the Research Goal and Retrieving Data

K.Karthikeyan AP/CSE.SNSCT

Empathy in Data Science Process at Research Goal



Defining Your Research Goals

Know What Questions You Want Answered

Set a Budget

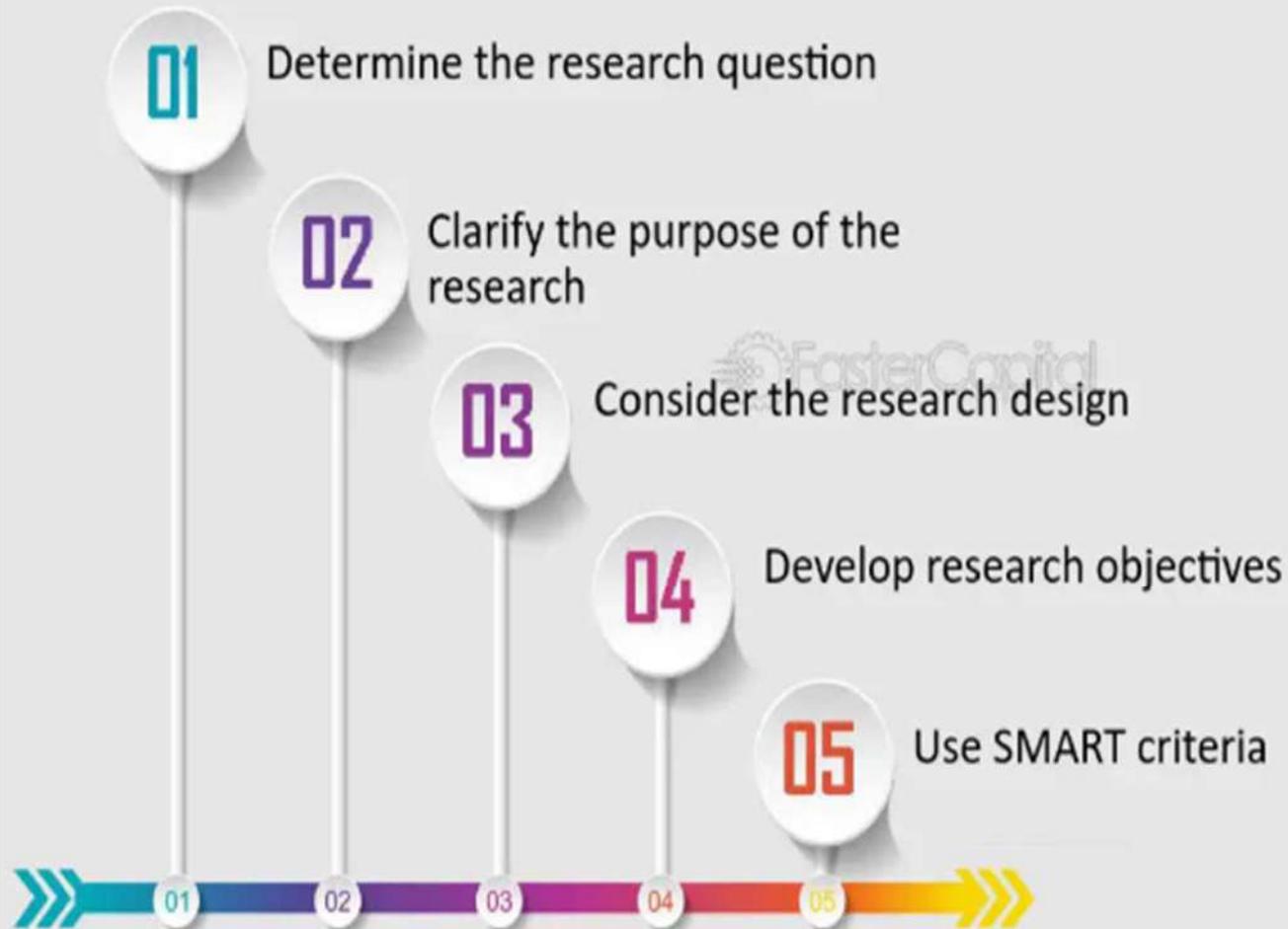
Determine What Type of Data You Need



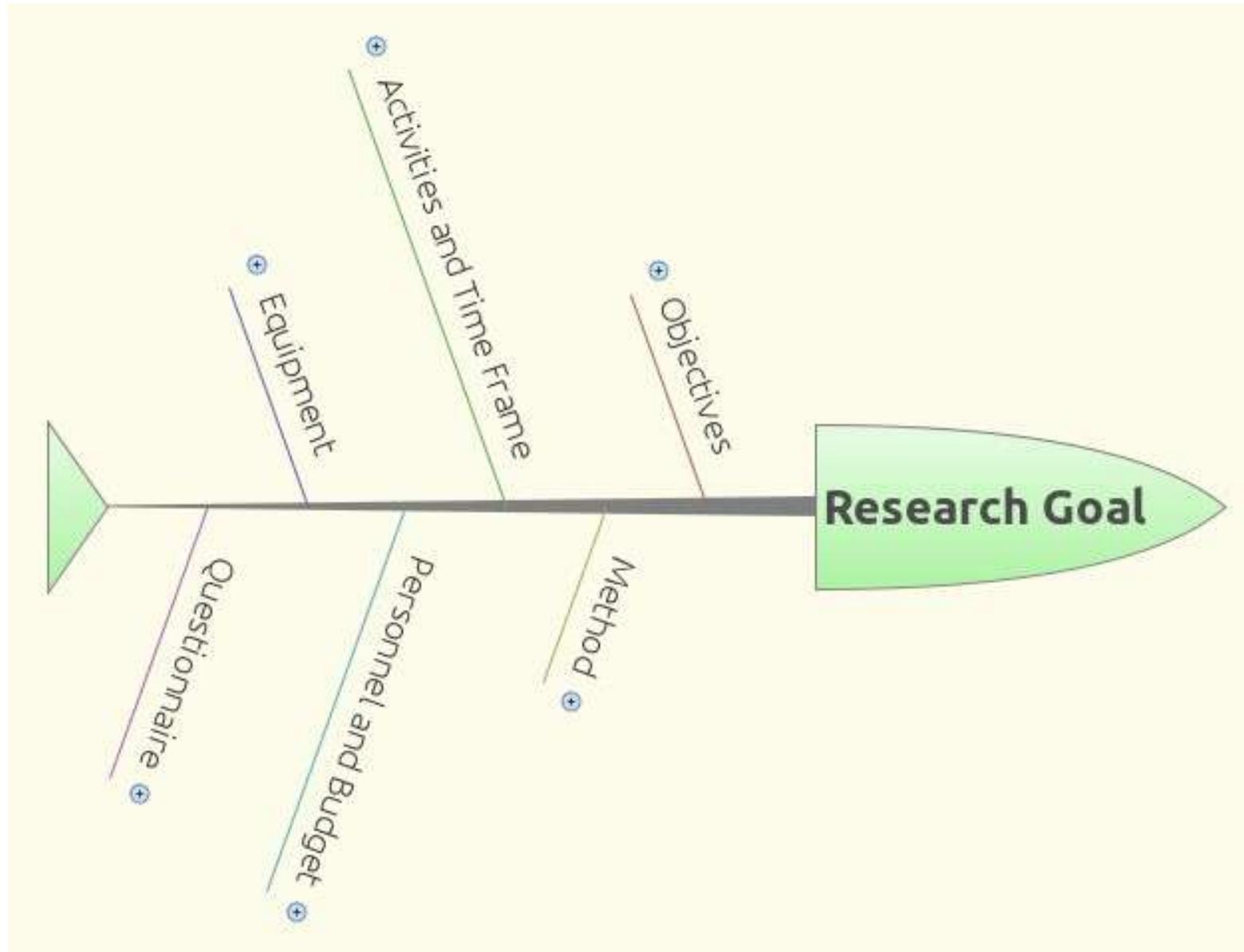
Be Clear About Your Target Market

Know What Data You Already Have

Identifying Research Goals and Objectives



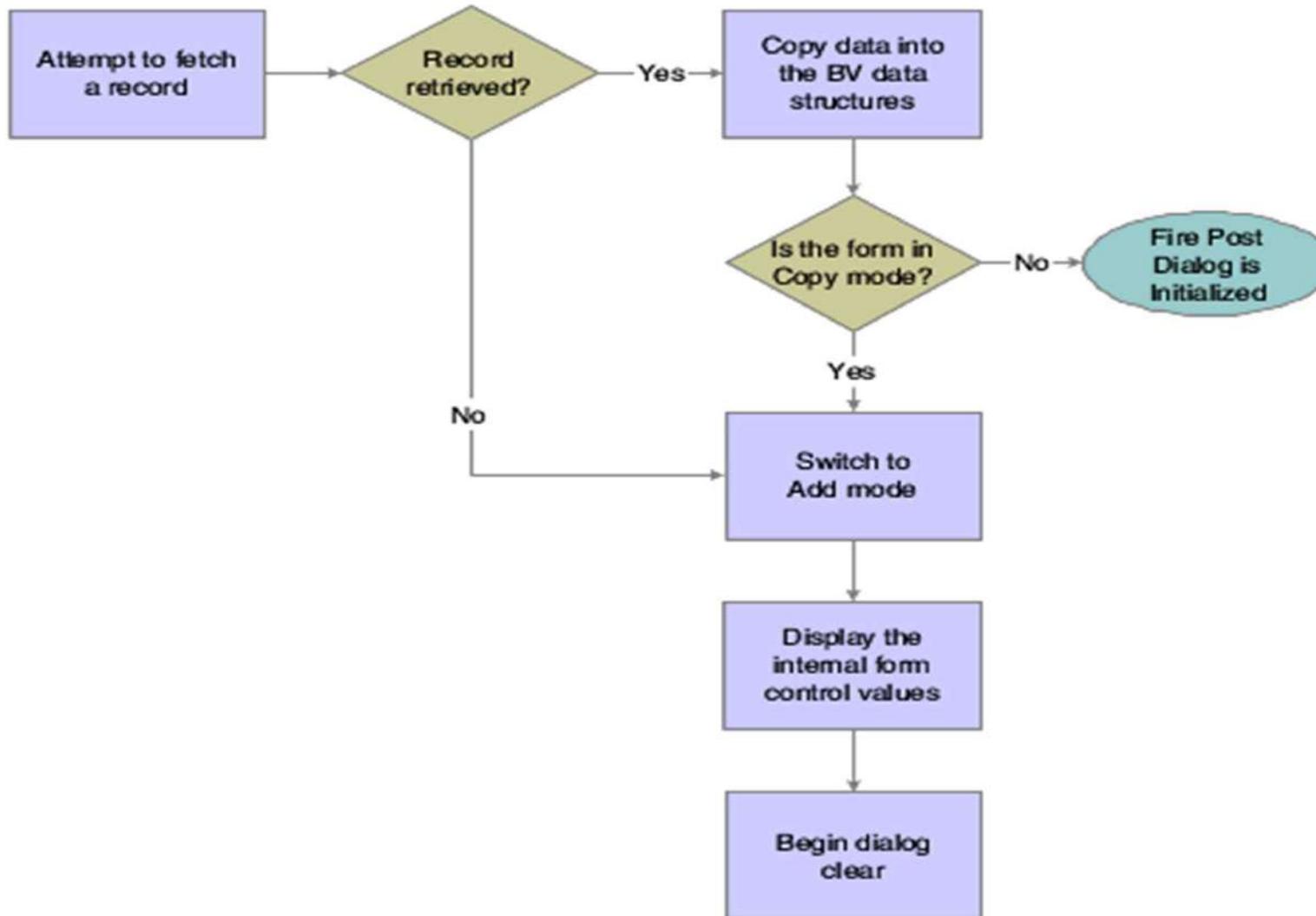
5 Key Components of a Research Goal



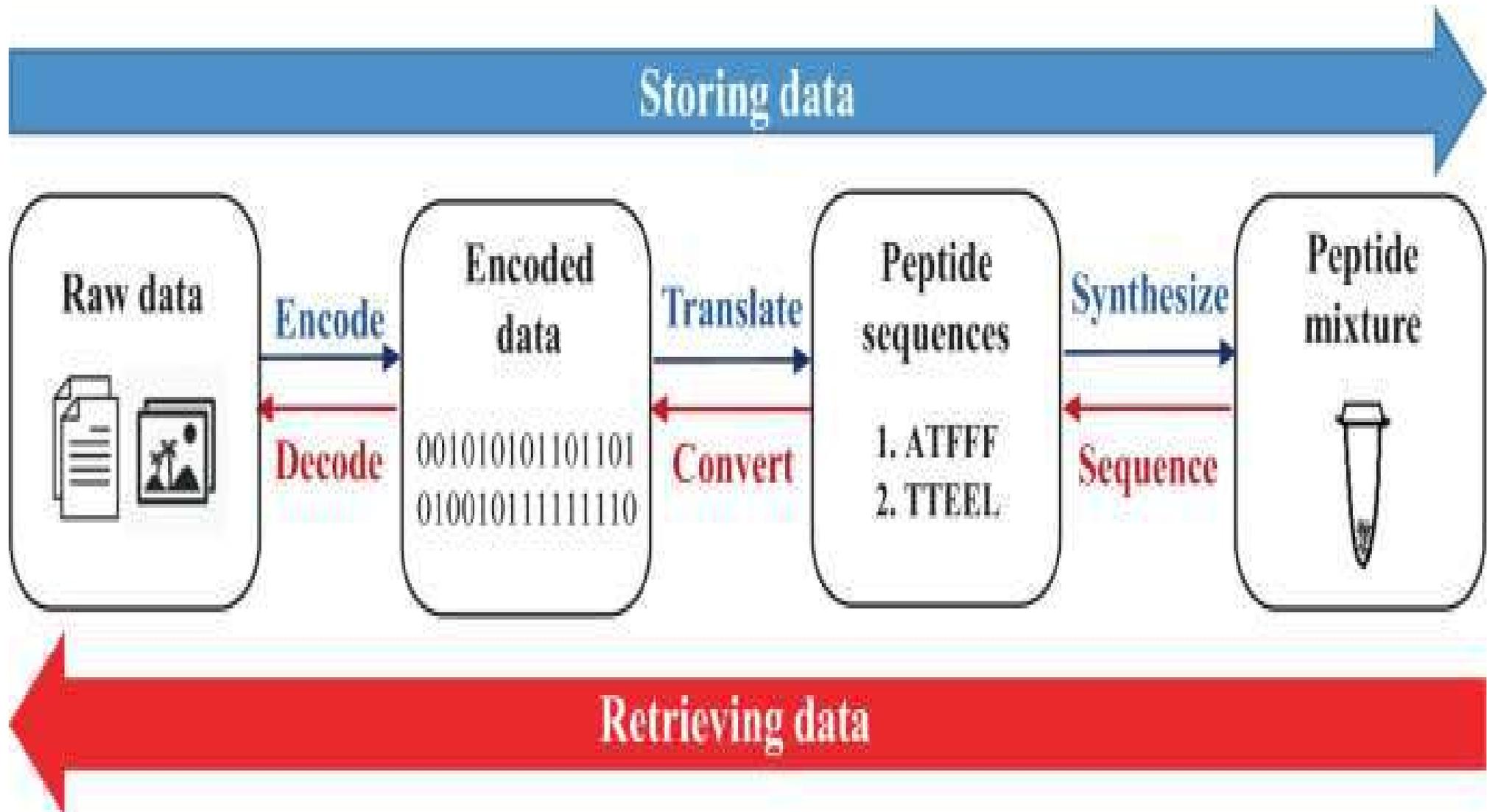
Goal Setting for Data Scientists



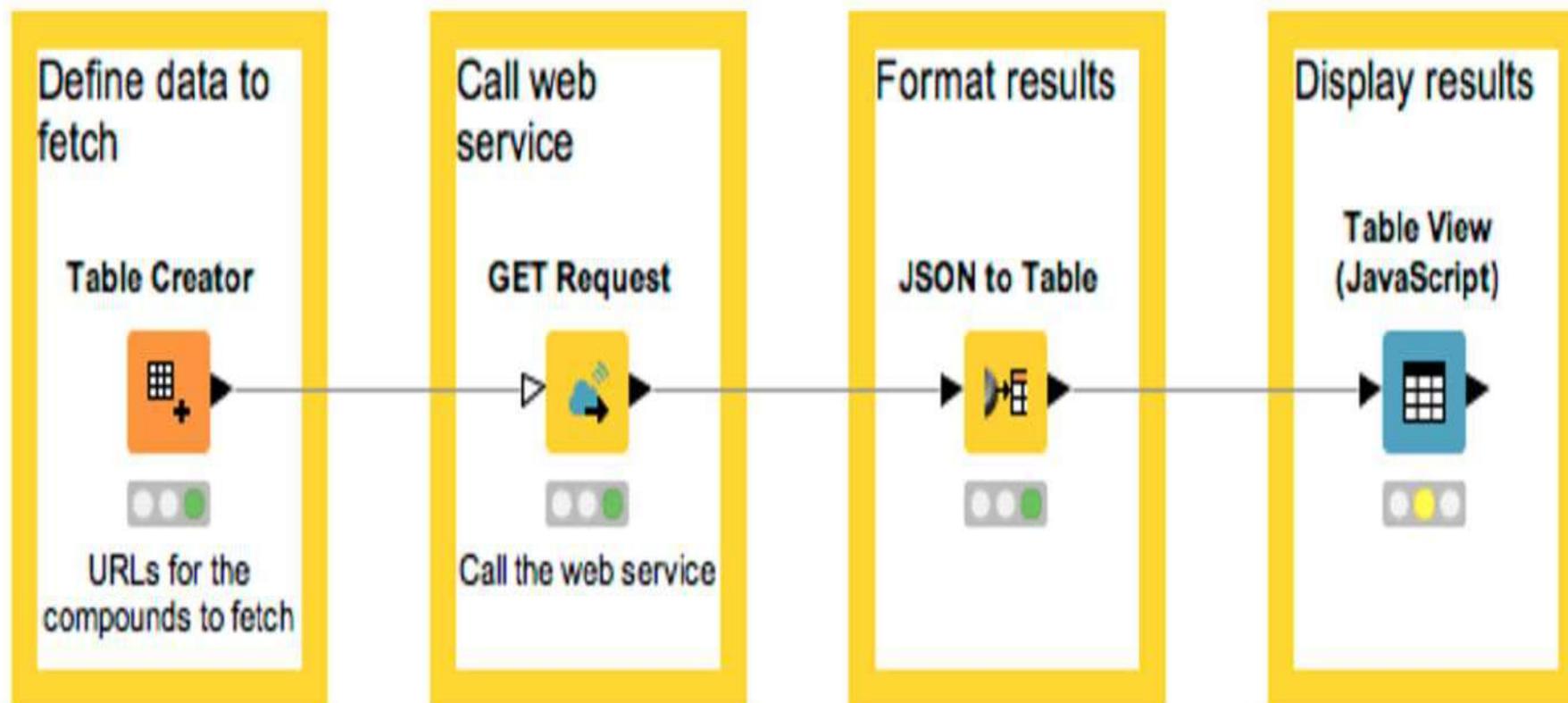
Data Retrieval



Storing and retrieving data into and from peptides



A RESTful way to find and retrieve data



Activity

Part 1: Setting the Research Goal ()

1. Research Goal Treasure Hunt

How it works:

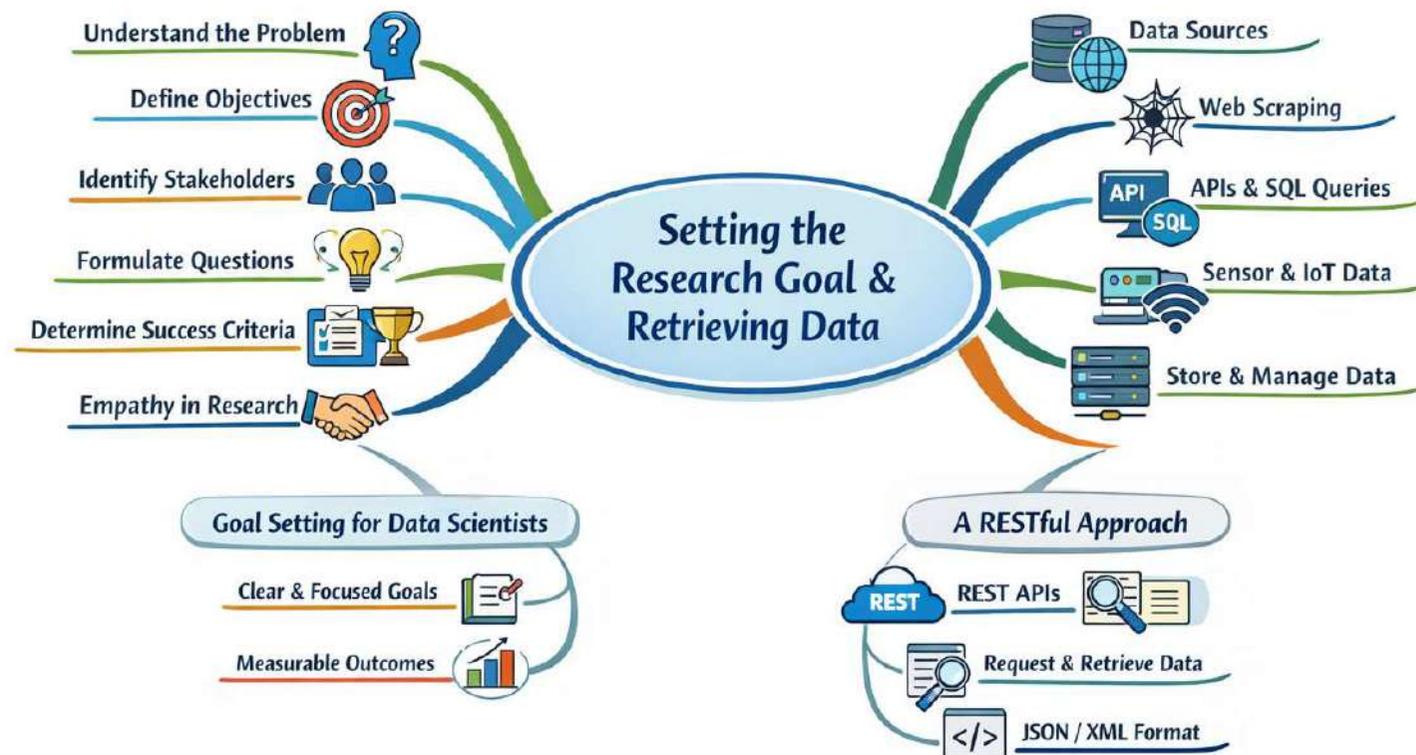
- Give students a broad topic (e.g., *Climate Change*, *Social Media*, *Healthy Eating*).
- Hide clue cards around the room with prompts like:

- *Who is affected?*
- *Why does this matter?*
- *What problem needs solving?*

- Students collect clues and use them to write a **clear research goal**.

 *Outcome:* Teaches focus and purpose.

Mind Map



ASSESSMENT

MCQs: Setting the Research Goal & Retrieving Data

1. What is the primary purpose of setting a research goal?

- a) To collect maximum data
- b) To define the direction and outcome of research
- c) To analyze data statistically
- d) To publish research results

Answer: b

2. A well-defined research goal helps in:

- a) Increasing data redundancy
- b) Avoiding irrelevant data collection
- c) Delaying the research process
- d) Reducing sample accuracy

Answer: b

REFERENCE BOOKS

1.Allen B. Downey, “Think Stats: Exploratory Data Analysis in Python”, Green Tea Press, 2014.

2.Sanjeev J. Wagh, Manisha S. Bhende, Anuradha D. Thakare, “Fundamentals of Data Science”, CRC Press, 2022.

3.Chirag Shah, “A Hands-On Introduction to Data Science”, Cambridge University Press, 2020.

4.Vineet Raina, Srinath Krishnamurthy, “Building an Effective Data Science Practice: A Framework to Bootstrap and Manage a Successful Data Science Practice”, A press, 2021.

