

Traditional Knowledge systems and influence on data management

Bridging Ancient Wisdom with Modern Technology

INTRODUCTION

- **Overview:** Introduction to the concept of traditional knowledge systems in Africa and their relevance.
- **Relevance:** Explore how these ancient systems can inform and enhance data management practices in Computer Science.

Traditional Knowledge Systems in Africa

- Outline traditional knowledge systems , including storytelling, oral traditions and community based information sharing.



Characteristics of Traditional knowledge Systems

- **Oral tradition:** Knowledge passed down verbally through generations.
- **Community-Based:** Information is shared and managed within communities.
- **Holistic:** Integrated approach combining various aspects of life and nature.

Traditional Knowledge and data Management

- How traditional knowledge systems relate to modern data management concepts.
- ❖ **Data structuring:** Use of storytelling to organize and preserve information.
- ❖ **Data Sharing:** Community based dissemination of knowledge.
- ❖ **Information Integrity:** Methods of ensuring accurate transmission of information.

Modern vs. Traditional Data Strategy

Data Strategy	Mindset	Ownership	Artifacts	Governance	Technology
Modern	Product-Oriented	Business & Tech	Agile	Federated and balanced	Purpose-fit / Cloud
Traditional	Platform-Oriented	Tech Only	Monolithic	Centralized control	One-size-fits-all / On-premises

Case Study: The Griot Tradition

- The role of griots (traditional African storytellers) in preserving and managing knowledge.
- ❖ **Information preservation:** Griots use mnemonic devices and structured stories to maintain historical records.
- ❖ **Data Retrieval:** Stories and chants used for recalling important information.

King K Kilometer

Henry H Hectometer

Died D Decameter

Magnificently M Meter

Drinking D Decimeter

Chocolate C Centimeter

Milk M Millimeter

Influence on Modern Data Systems

- How insights from traditional knowledge systems could be applied to modern data management.
- ❖ **Data Structuring:** Incorporating narrative techniques for better data representation.
- ❖ **Community-based platforms:** Designing systems that support collaborative knowledge sharing.
- ❖ **Data Integrity:** Methods to ensure the accuracy and reliability of information.

Case Study: Knowledge Management Systems

- Exploring how traditional knowledge principles are used in modern knowledge management systems.
- ❖ **Knowledge Repositories:** Platforms that use narrative community-based approaches for organizing information.
- ❖ **Collaborative Tools :** Systems that facilitate community driven data collection and sharing.

Challenges and Opportunities

- **Challenges**

- ❖ **Cultural Differences:** Adapting traditional methods to modern technologies.
- ❖ **Integration:** Merging traditional knowledge with contemporary data practices.

- Opportunities:

- ❖ **Enhanced Data Management:** Innovative approaches to data structuring and sharing.
- ❖ **Preservation of Culture:** Ensuring traditional knowledge is maintained and utilized.