

PORTFOLIO #2

# DATA AND INFORMATION

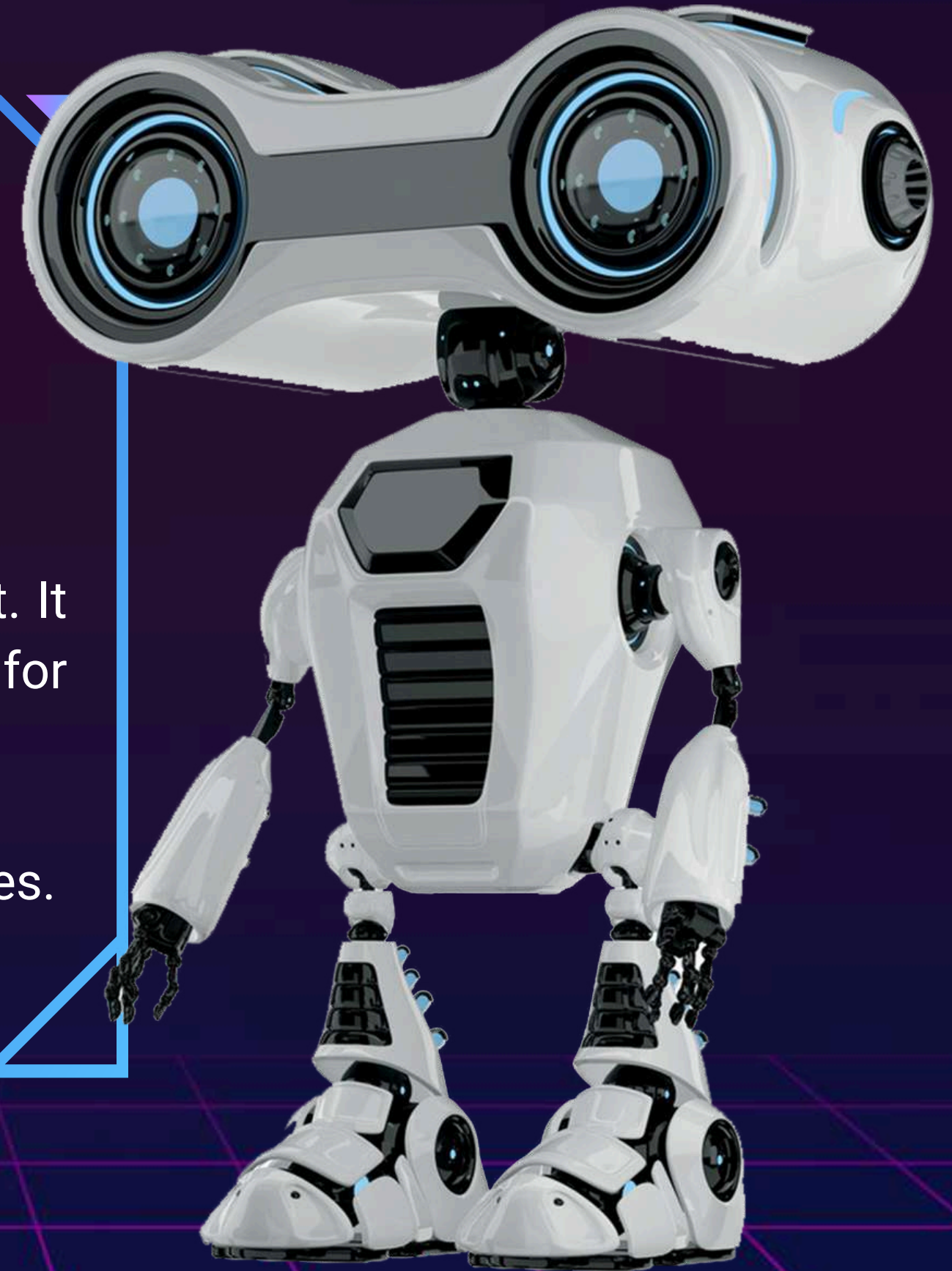




# WHAT IS DATA?

Data refers to raw, unprocessed facts and figures without context. It can take the form of numbers, text, images, and more, collected for analysis or reference. Data alone doesn't have inherent meaning.

Example: Temperature readings, sales numbers, or customer names.

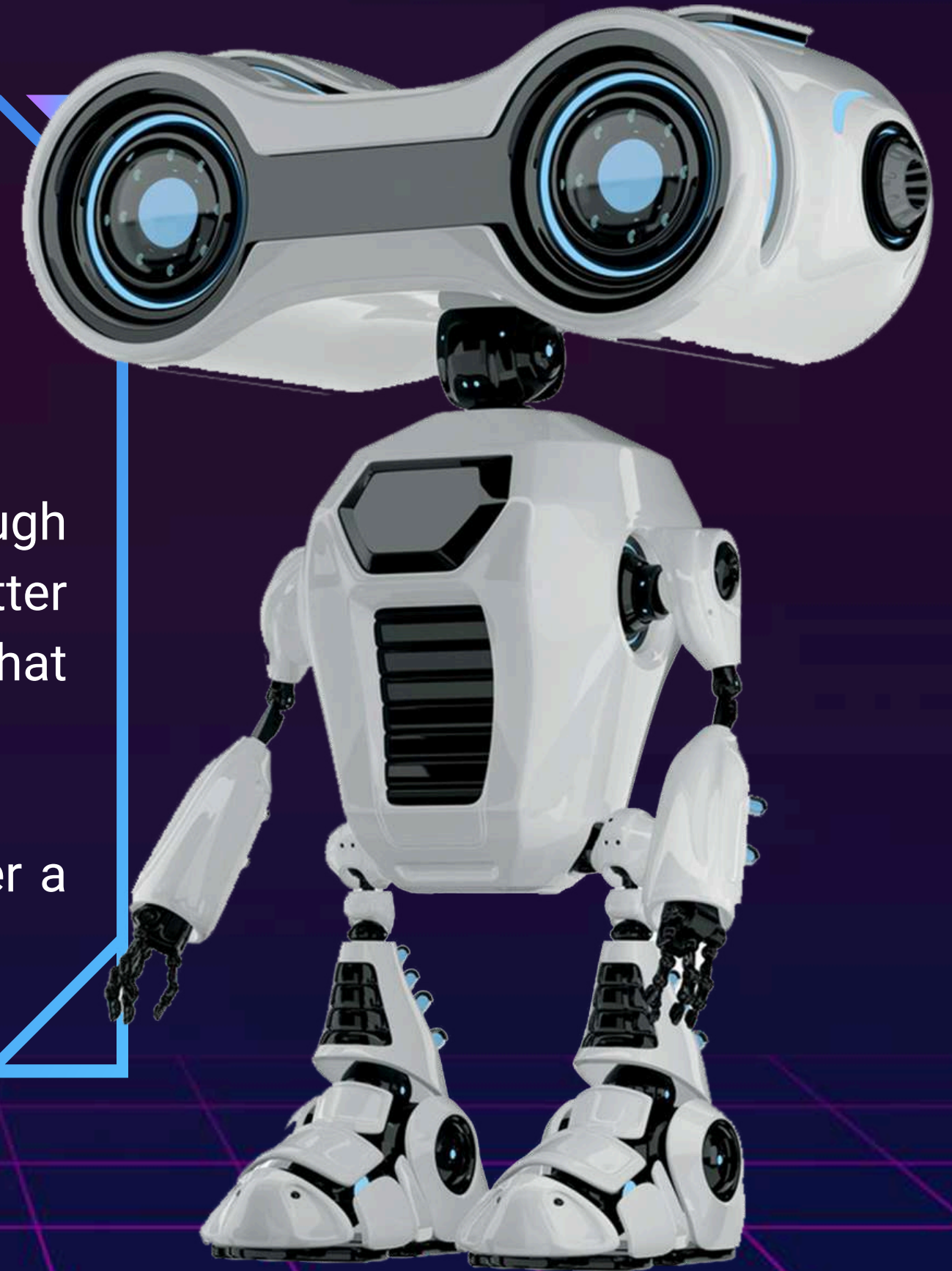




# WHAT IS INFORMATION?

Information is processed data that has been given meaning through context, analysis, or interpretation. Information enables better decision-making because it is structured and organized in a way that makes sense.

Example: A report showing a pattern in temperature changes over a week provides information that can inform weather predictions.



Aspect	Data	Information
Definition	Raw, unorganized facts and figures.	Processed data that has meaning.
Nature	Unprocessed and without context.	Processed, structured, and meaningful.
Form	Numbers, symbols, text, images, etc.	Organized data with context and relevance.
Purpose	Collected for analysis or storage.	Used for decision-making or understanding.
Example	A list of numbers (e.g., 35, 40, 45	A report showing trends over time (e.g., temperature changes).

# KEY DIFFERENCES





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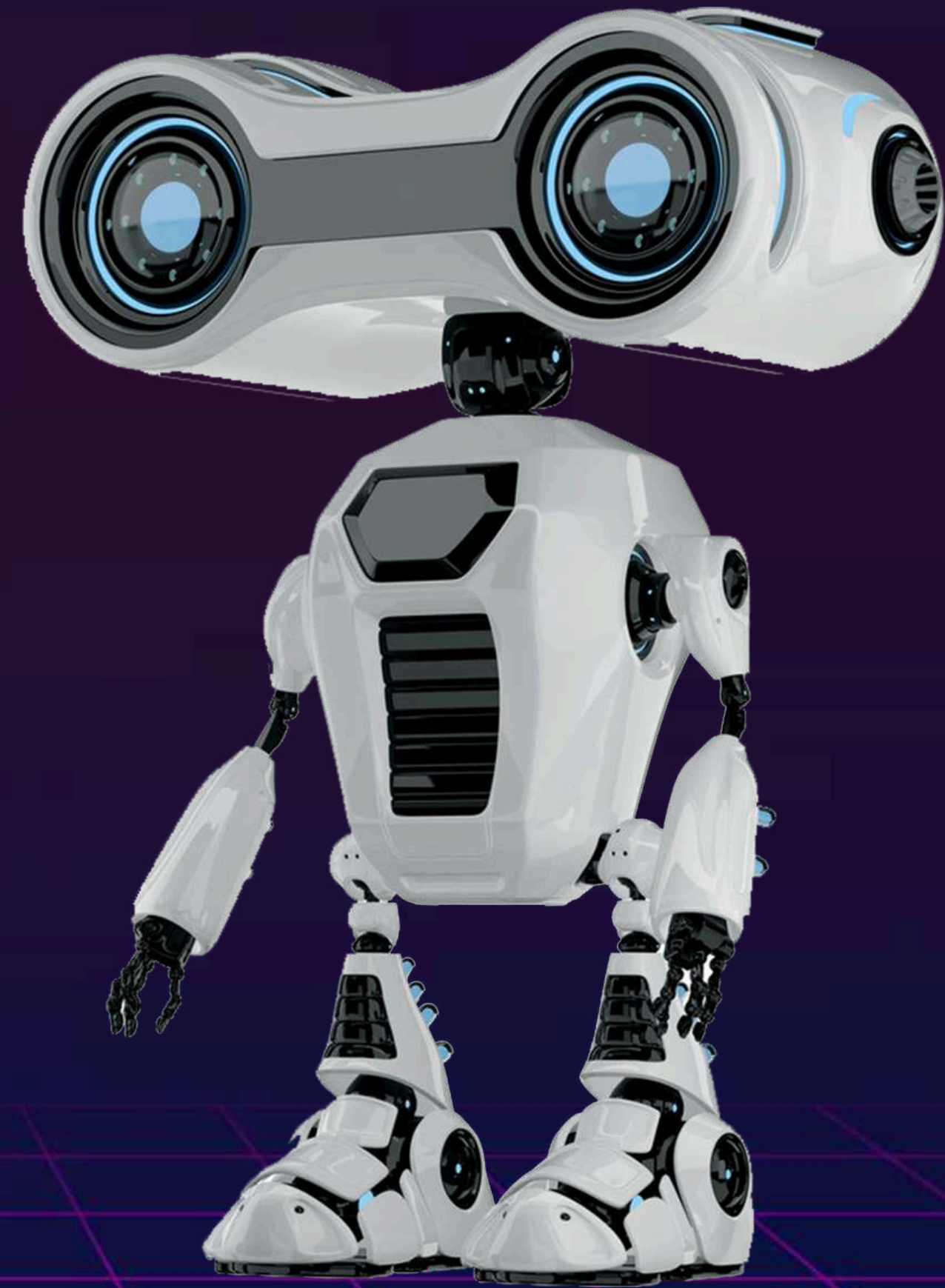
# INFORMATION SYSTEMS





# WHAT IS AN INFORMATION SYSTEM?

An Information System (IS) is a coordinated set of components that collect, store, process, and disseminate data to provide information that aids in decision-making. These systems integrate hardware, software, databases, and networks.





# COMPONENTS

1

**Hardware:** Physical devices like computers, servers, and networking equipment.

2

**Software:** Programs and applications that process data (e.g., ERP, CRM systems).

3

**Data:** The raw material that is processed into information.

4

**People:** Users who interact with the system, from data entry personnel to decision-makers.

5

**Processes:** Procedures or protocols governing how data is collected, processed, and used.





# TYPES OF INFORMATION SYSTEMS

1

**Transaction Processing Systems (TPS):** Handle day-to-day transaction data.

2

**Management Information Systems (MIS):** Convert data into actionable information for middle managers.

3

**Decision Support Systems (DSS):** Help in making decisions by providing data analysis and model-based solutions.

4

**Executive Information Systems (EIS):** Provide senior executives with information for strategic decision-making.

5

**Enterprise Resource Planning (ERP):** Integrated systems that manage core business processes.





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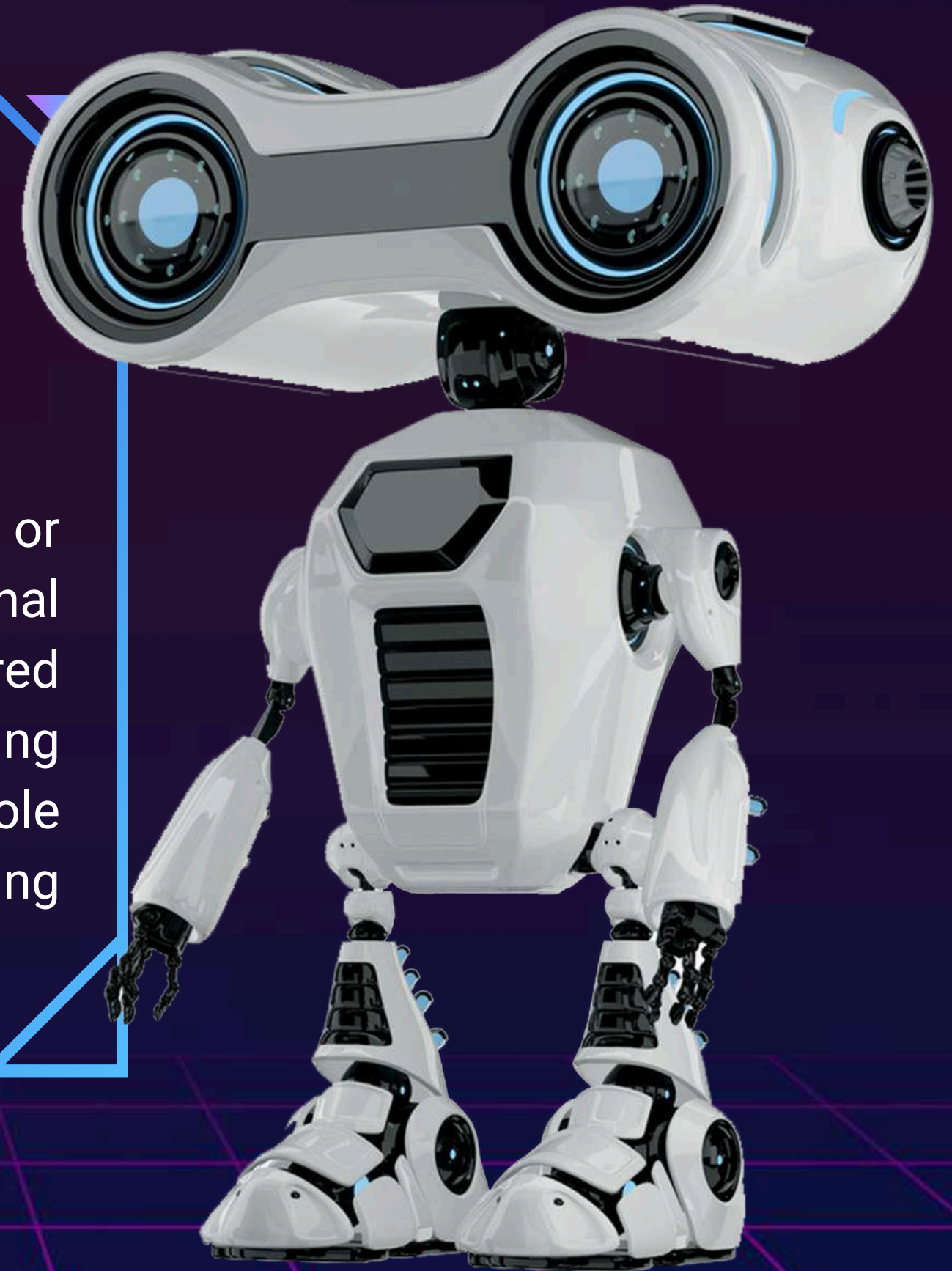
# DIFFERENT TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEMS





# WHAT ARE SUPPORT SYSTEMS IN INFORMATION SYSTEMS?

Support systems in information systems are specialized tools or subsystems that help in decision-making, analysis, and operational activities within an organization. These systems provide structured support for users by processing and interpreting data, enabling more informed and effective decision-making. They play a key role in enhancing productivity, improving performance, and solving complex problems.







# DECISION SUPPORT SYSTEMS (DSS)

- Purpose: Support semi-structured or unstructured decision-making processes.

## Key Features:

- Data analysis, simulation models, and scenario evaluation.
- Provide "what-if" analysis.

**Example:** A financial DSS that forecasts investment returns based on different economic scenarios.







# EXPERT SYSTEMS (ES)

- **Purpose:** Mimic human expertise to make decisions or solve complex problems.

## Key Features:

- Based on knowledge base and inference engine.
- Provides recommendations based on expert-level knowledge.

**Example:** Medical diagnostic systems that recommend treatments based on symptoms and patient history.







# EXECUTIVE INFORMATION SYSTEMS (EIS)

- **Purpose:** Provide high-level overviews of organizational data for executives.

## Key Features:

- Simple, visual interfaces like dashboards.
- Real-time access to critical data.

**Example:** A dashboard showing company-wide performance metrics, key financial indicators, and strategic goals.







# GROUP DECISION SUPPORT SYSTEMS (GDSS)

- **Purpose:** Facilitate group decision-making through collaboration tools.

## Key Features:

- Supports brainstorming, voting, and collaboration.
- Anonymity in responses to encourage open communication.

**Example:** A GDSS for board meetings where participants vote on key issues.







# KNOWLEDGE MANAGEMENT SYSTEMS (KMS)

- Purpose: Capture and share organizational knowledge.

## Key Features:

- Organizes knowledge into repositories for easy access.
- Facilitates learning, innovation, and collaboration.

**Example:** A company intranet that shares best practices, lessons learned, and expert advice.



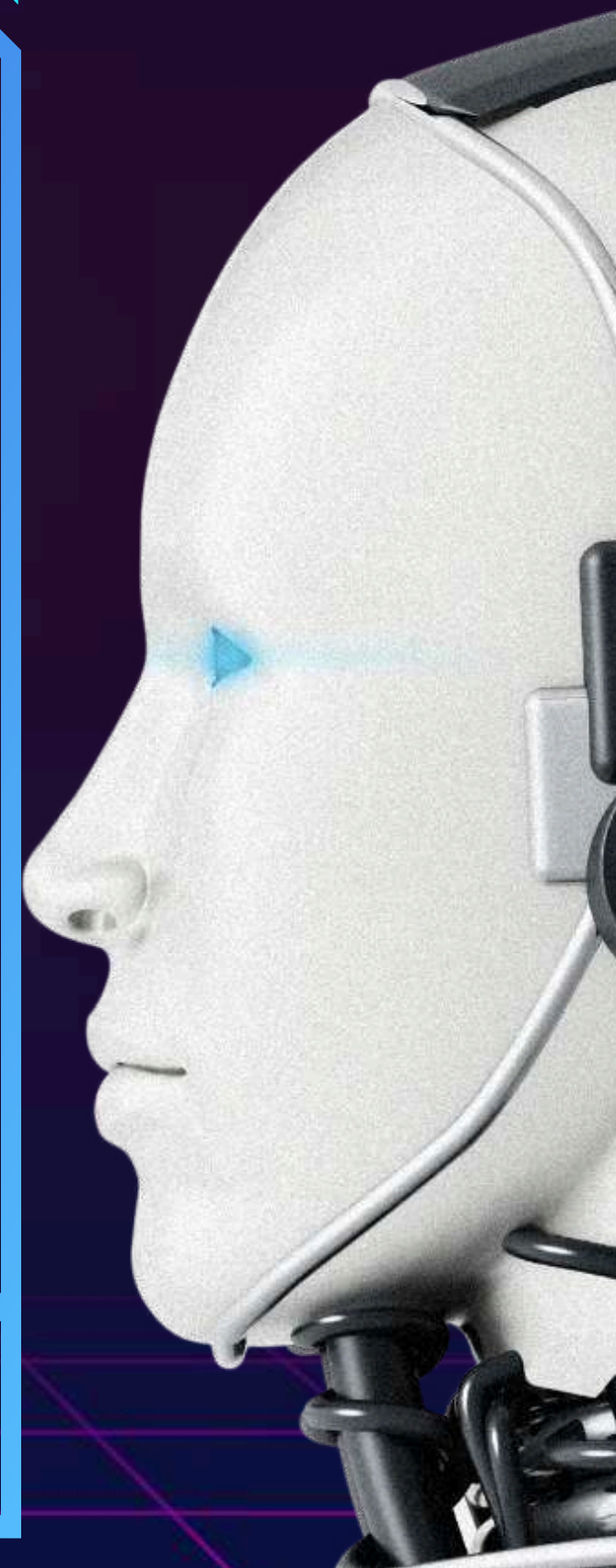


In today's rapidly advancing technological world, data and information are critical assets that organizations leverage to make informed decisions and stay competitive. Data, in its raw form, is merely a collection of facts, figures, or measurements. Without context, data is essentially meaningless. However, once processed and interpreted, it becomes information, which can be understood and used in decision-making. The transformation of data into information is a key function in any Information System (IS).

An Information System is designed to collect, process, store, and disseminate data to provide meaningful information that organizations can use to support operational and strategic goals. These systems are composed of various components, including hardware, software, data, people, and processes, all working together to ensure efficient operations. In this regard, IS not only supports daily business activities but also helps in long-term planning and resource management.

Information systems come in different forms, each with a specific role in aiding decision-making. For instance, Transaction Processing Systems (TPS) handle day-to-day operations, such as tracking sales, processing payroll, or managing inventory. Management Information Systems (MIS), on the other hand, convert raw data from TPS into meaningful reports that middle managers can use to make decisions. Decision Support Systems (DSS) go a step further by using data analysis and modeling to help solve complex problems. Meanwhile, Executive Information Systems (EIS) provide high-level, summarized information tailored to the needs of senior executives.

**ANALYSIS/REACTION #1**



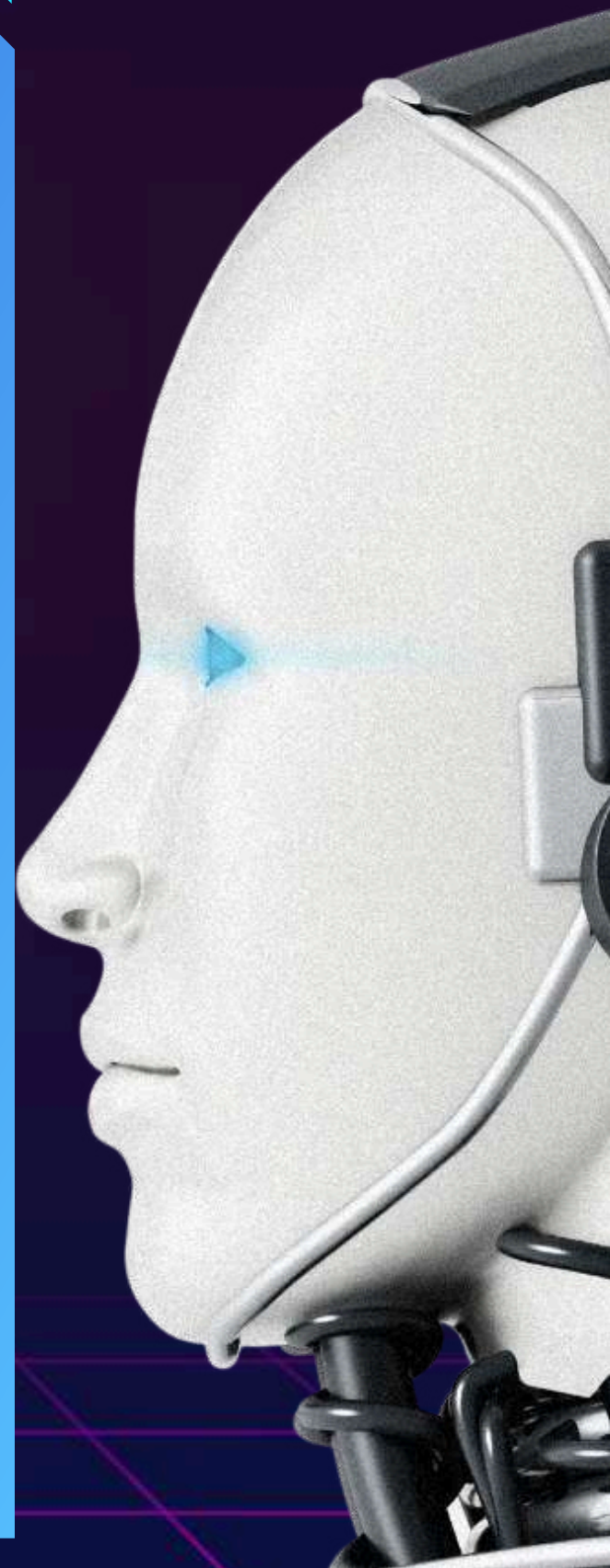


Support systems in information systems are particularly vital for decision-making. These include DSS, Expert Systems (ES), Group Decision Support Systems (GDSS), and Knowledge Management Systems (KMS). Each of these systems serves a specific purpose. DSS, for example, allows managers to simulate various scenarios and choose the best course of action, while ES mimics the decision-making ability of human experts, often used in fields such as medicine or engineering. GDSS facilitates group decision-making by enabling collaboration and communication, and KMS ensures that organizational knowledge is captured and shared across the enterprise.

The importance of support systems cannot be overstated. They enable businesses to deal with unstructured or semi-structured problems by providing the tools and methodologies to analyze data and make more informed choices. In a world where business environments are becoming increasingly complex and data-driven, these support systems act as the backbone of strategic decision-making, helping organizations to adapt to changes and overcome challenges.

In conclusion, the synergy between data, information, and support systems within Information Systems represents a cornerstone of modern business practices. The ability to transform raw data into actionable insights allows organizations to stay agile and competitive, particularly in industries where timely, data-driven decisions are essential. As organizations continue to grow in size and complexity, the role of these systems will only become more critical, driving innovation and efficiency across all sectors.

## ANALYSIS/REACTION #2





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## REFERENCES #3



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**THANK YOU!**