Abstract geometric lines in the top-left corner of the page, consisting of several overlapping, irregular polygons and lines in a light gray color.

# PORTFOLIO#2 DATA, INFORMATION, AND INFORMATION SYSTEMS

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An abstract geometric design featuring two thin, dark grey lines that intersect on a light grey background. One line runs diagonally from the top-left towards the bottom-right, while the other runs from the top-right towards the bottom-left. The intersection point is located to the left of the text.

# DATA AND INFORMATION

# WHAT ARE DATA AND INFORMATION?

**Data and information are critical assets that can provide businesses with a competitive advantage. Timely access to data and information is key to business success, as it can enable businesses to find goods at lower prices, develop new products and innovations, and maintain a competitive edge. However, data and information holders often try to protect the secrecy of their data and information in order to continue benefiting from the competitive advantages they provide.**

# WHAT ARE DATA AND INFORMATION?

**Data are the most fundamental units of an information system, but they are often overlooked. Data are the primary focus of social work research, whether quantitative or qualitative. However, there is often a conflation between data and information, where data entered into spreadsheets are referred to as "information", when the column headings actually represent the information about the data. Colloquially and sometimes professionally, people use the terms "data" and "information" interchangeably, even though technically, data are entered into spreadsheets and the column headings convey the information about what the data concern.**

# WHAT ARE DATA AND INFORMATION?

- **Data is the raw facts and statistics collected from various sources.**
- **Information is the interpretation and understanding of that data, typically accompanied by a presumption of truth or fact.**
- **Accurate data can lead to useful and valuable information, but inaccurate or false data can also lead to misinformation and faulty conclusions.**

# WHAT ARE DATA AND INFORMATION?

- **Information can take various forms, including physical documents, digital files, and biological signals.**
- **Data and information can be transmitted using both analog and digital methods, including binary signals and various modulation techniques.**
- **Information can exist in physical, abstract, and virtual forms, and can be stored in various media and interacted with by both living and non-living entities.**

# WHAT ARE DATA AND INFORMATION?

- **There is little consensus on the precise nature of the relationship between data and documents, with some viewing documents as made up of data, and others viewing datasets as made up of documents.**
- **Data indexing practices like the Data Citation Index (DCI) treat data as consisting of four kinds of "documents": data repositories, data studies, datasets, and software.**
- **While data (information on units of analysis) may exist independently of documents, for data and information sciences, the primary concept is documents, not data, as the only thing that can be managed are data recorded as documents, and data need to be accompanied by other information found in documents.**





# INFORMATION SYSTEMS



## WHAT ARE INFORMATION SYSTEMS?

Information Systems are defined as a set of services that create a workflow of information directed to specific groups and members, allowing individuals to share ideas and talents with others and carry out tasks efficiently and effectively. Information Systems also revolve around creating information useful to users, and in some cases creating knowledge, with management of information and/or knowledge being part of their functionalities.



## WHAT ARE INFORMATION SYSTEMS?

Information Systems (IS) are defined as important tools for the collection, processing/organization, and dissemination of official statistics on violence against women, with the goal of assisting in the planning and implementation of intersectoral public policies. However, the paper also argues that IS are not neutral instruments, but rather reflect power relations and worldviews that can impact how violence against women is characterized and addressed.



## WHAT ARE INFORMATION SYSTEMS?

Information Systems (IS) is defined as "the integrated set of components for facilitating the collection, controlling, organising, storing / retrieving and processing of data into information." IS is one of the three main types of information systems used within an organization, along with Transaction Processing Systems (TPS) and Expert Systems (ES). IS is developed using technology, especially computer systems, to automate these business processes of collecting, controlling, organizing, storing/retrieving, and processing data into information.



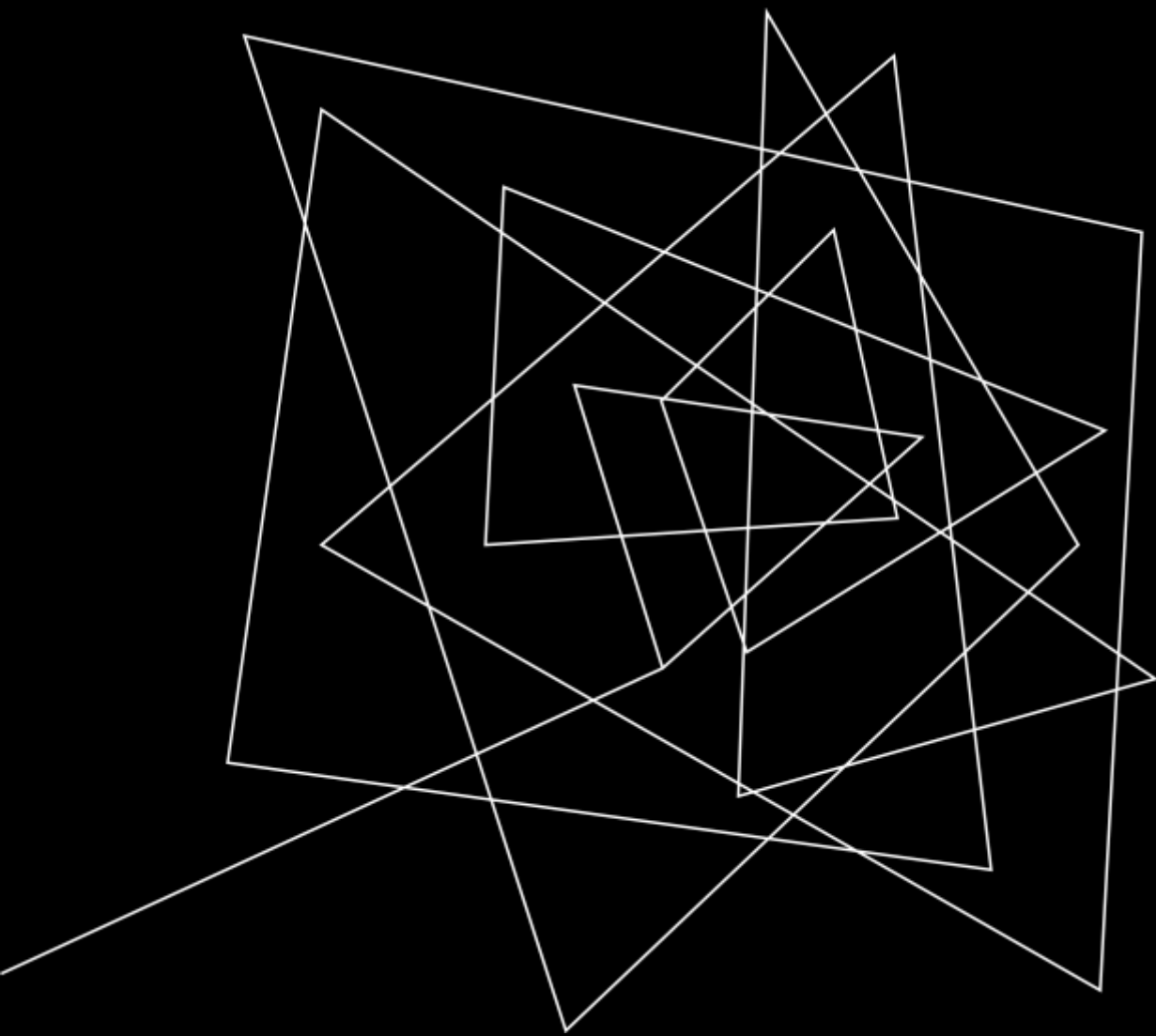
## WHAT ARE INFORMATION SYSTEMS?

Information Systems can be inferred to be an academic discipline that integrates innovation, research, and education at the intersection of people, information, and computing technology. It covers topics such as web, social media, data science, business applications, and user experience, and aims to provide students with practical skills and knowledge for careers in these areas. The research in Information Systems focuses on data-intensive research and human-centered computing, and is conducted by highly accomplished faculty.



## WHAT ARE INFORMATION SYSTEMS?

Information Systems (IS) are technology-based systems that are an integral part of an organization, as information is a key asset. IS supports an organization's day-to-day activities, decision-making, and strategic advantages. The key functions of IS include decreasing wasteful spending, enabling excellent and error-free documentation, analysis, and measurement of organizational activities. The basic objectives of IS are to enhance production, quality development, service delivery, reduce costs, and increase the competitiveness of the organization.



# DIFFERENT TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEMS

# WHAT ARE THE TYPES OF SUPPORT SYSTEMS?

In information systems, there are different types of support systems that help organizations run smoothly. Transaction Processing Systems (TPS) handle everyday activities like tracking sales and inventory. Office Automation Systems (OAS) make routine office tasks, such as writing documents and sending emails, easier. Knowledge Work Systems (KWS) help professionals like engineers and designers do specialized work. Management Information Systems (MIS) give managers regular reports to help them make decisions. Decision Support Systems (DSS) help analyze data to guide important choices. Expert Systems use rules to solve problems like a human expert would. Group Decision Support Systems (GDSS) and Computer-Supported Collaborative Work (CSCW) systems allow teams to work together and make decisions. Lastly, Executive Support Systems (ESS) help senior leaders by providing important information for strategic decision-making. Each system plays a key role in helping with different tasks, from daily operations to big-picture planning.

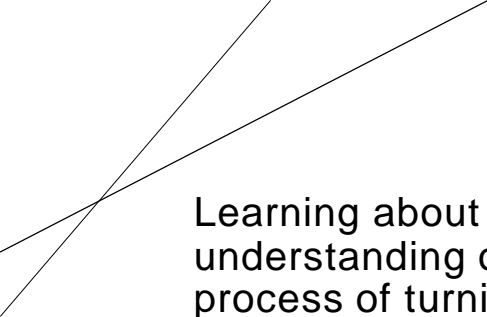


# WHAT ARE THE TYPES OF SUPPORT SYSTEMS?

According to multiple sources, There are different types of support systems that help organizations in Information Systems run smoothly. Transaction Processing Systems (TPS) handle everyday activities like tracking sales and inventory. Office Automation Systems (OAS) make routine office tasks, such as writing documents and sending emails, easier. Knowledge Work Systems (KWS) help professionals like engineers and designers do specialized work. Management Information Systems (MIS) give managers regular reports to help them make decisions. Decision Support Systems (DSS) help analyze data to guide important choices. Expert Systems use rules to solve problems like a human expert would. Group Decision Support Systems (GDSS) and Computer-Supported Collaborative Work (CSCW) systems allow teams to work together and make decisions. Lastly, Executive Support Systems (ESS) help senior leaders by providing important information for strategic decision-making. Each system plays a key role in helping with different tasks, from daily operations to big-picture planning.



# REFLECTION



Learning about data, information, information systems, and different support systems has really deepened my understanding of their importance in IT. As an IT student, I'm constantly surrounded by loads of data, but it's the process of turning raw data into useful information that truly makes a difference in decision-making. This process isn't just technical; it involves cleaning, filtering, and using algorithms to reveal important insights. Understanding the difference between data and information is essential, especially as I prepare for a future in IT, where managing and interpreting data effectively can greatly impact business success.


Information systems have also helped me see how technology connects with the way organizations run. They're not just tools for processing data—they're the foundation of modern businesses, improving decision-making, communication, and overall efficiency. From basic transaction processing systems that keep data accurate to advanced decision support systems that help with complex decisions, information systems enable organizations to operate smoothly.

The growth of information systems, especially with the rise of big data and real-time analytics, shows how vital they are in shaping strategic decisions in today's fast-paced world. This highlights the importance of mastering both technical skills and understanding how these systems support and drive business goals. Different types of information systems, like MIS, EIS, and Expert Systems, offer various functions that help organizations meet their diverse needs.

Learning about these systems has made me appreciate the strong connection between technical knowledge and business understanding. As I work toward a career in IT, grasping these details gives me the tools I need to use technology to solve real-world challenges.

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# THANK YOU

Submitted by: Charles Andre Siaton