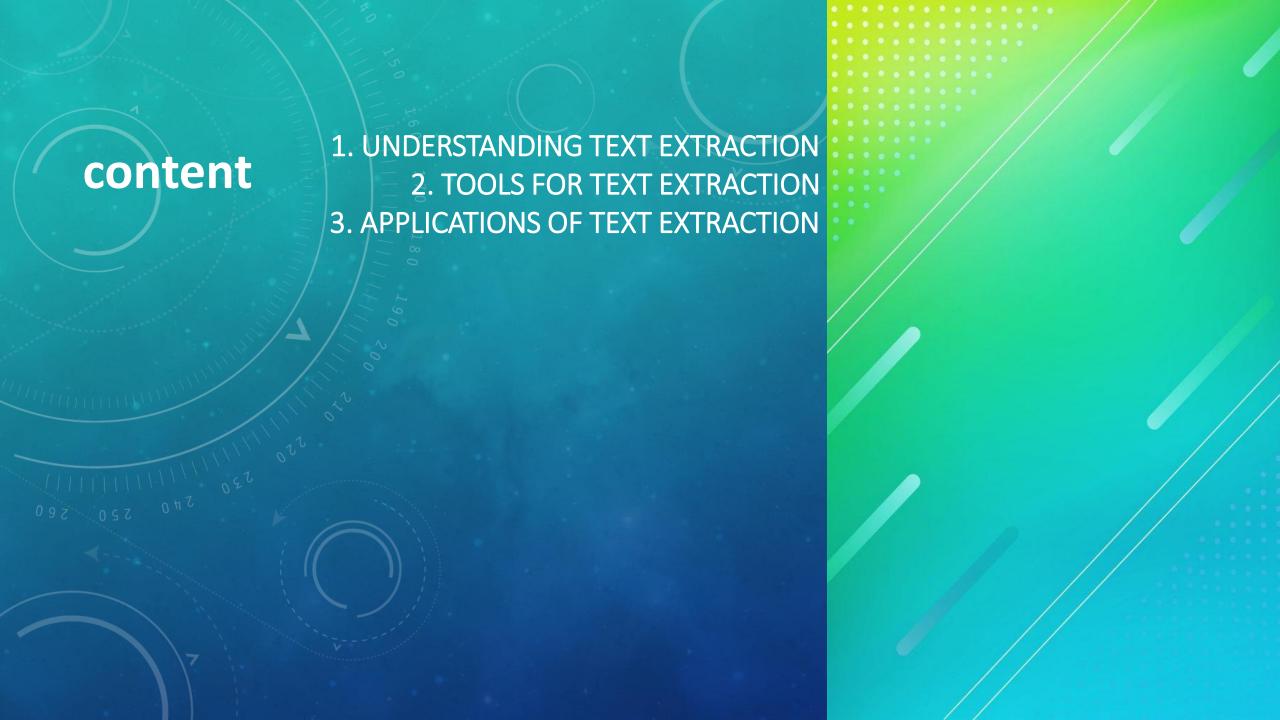
# CodeBytes

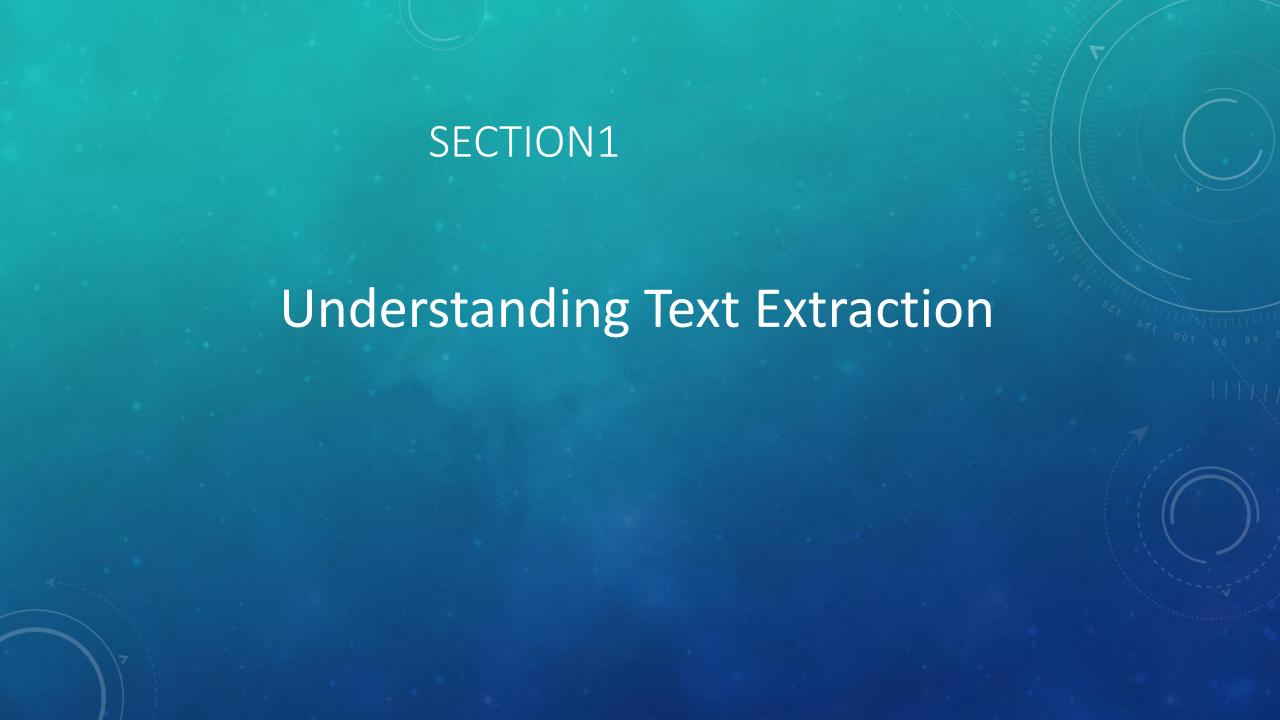
-Enhanced Text Extractor Tool

Abhishek Sharma – 2115000030

Atharv Bharadwaj – 2115000241

Kunal Gupta – 2115000562





## IMPORTANCE OF TEXT EXTRACTION

01

02

03

### **Data Extraction**

Text extraction tools enable accurate extraction of text, tables, images, and vector graphics from documents, preserving the context and structure of the content.

# **Context Preservation**

The ability to extract text accurately from documents ensures that the original context and formatting are maintained, facilitating further analysis and processing.

### **Applications**

Text extraction is essential for various purposes, including data analysis, information retrieval, and content repurposing.

# XTRACT.10 Challenges of data extraction Maintaining data Reduced usability of the data integrity Inability to process Integration with large volumes of data existing systems

# CHALLENGES IN TEXT EXTRACTION

### **Accuracy and Precision**

While text extraction tools are effective, there are challenges in accurately recognizing and extracting content, especially in the case of complex layouts and formatting.

### **Contextual Understanding**

The ability to recognize and extract content with mathematical or geometrical elements remains a challenge for existing text extraction tools.

### **Improvement Opportunities**

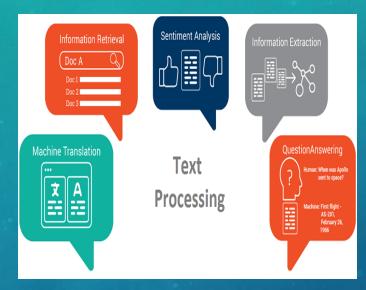
There is a need for continuous improvement in text extraction technologies to enhance accuracy and expand the range of content that can be effectively extracted.

## TEXT EXTRACTION TECHNIQUES



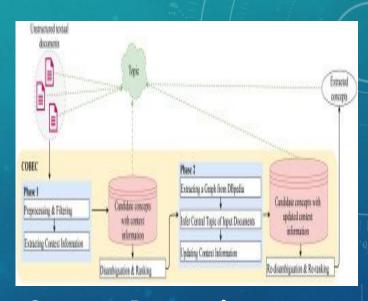
# **Optical Character Recognition (OCR)**

OCR technology plays a crucial role in text extraction from images, enabling the conversion of text within images into editable and searchable content.



# Machine Learning Algorithms

Advanced text extraction tools utilize machine learning algorithms to improve accuracy and adapt to diverse document layouts and languages.



# **Context-Preserving Extraction**

Some tools focus on preserving the context and structure of the extracted text to ensure that the original document's formatting is maintained.

## TOOLS FOR TEXT EXTRACTION

01

#### **PyMuPDF**

PyMuPDF allows accurate extraction of text, tables, images, and vector graphics from documents while preserving the context and structure of the content.

03

#### **OCR Text From Image**

OCR Text From Image is a highly effective tool for extracting text from images, providing a solution for converting text within images into editable and searchable content.

02

#### **Textricator**

Textricator is a tool designed to extract text from documents and generate structured data, enhancing the usability of the extracted content for analysis and processing.

04

#### **PowerToys Text Extractor**

PowerToys Text Extractor enables the extraction of text from various sources on the screen, including images and videos, contributing to comprehensive content extraction capabilities.

# APPLICATIONS OF TEXT EXTRACTION

### **Data Analysis and Processing**

Text extraction tools are instrumental in extracting structured data from documents, facilitating data analysis and processing for various industries and domains.

#### **Document Digitization**

Text extraction tools facilitate the digitization of physical documents by extracting text and converting it into digital, searchable content.

### **Content Analysis and Insights**

Extracted text from documents enables content analysis, leading to the generation of insights and actionable information for decision-making and research.

#### **Business and Productivity**

Text extraction tools enhance business productivity by streamlining data processing tasks, enabling efficient extraction and analysis of textual content.

