

AI in Working with Text

Workshop #2



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WORKSHOPS FOR YOUNG PEOPLE “Technologies of tomorrow - combating disinformation and building security capacity in the use of artificial intelligence by young people” within the framework of the small-scale cooperation partnership project in the Youth sector of the Erasmus+ Program “Technologies of tomorrow - combating disinformation and building security capacity in the use of artificial intelligence by young people.”
(2023-1-ES02-KA210-YOU-000164824)

Agenda

1. Welcome and Introduction
2. Introduction to AI in Text Processing
3. Text Classification with Online Tools
4. Sentiment Analysis with Online Tools
5. Keyword Extraction with Online Tools
6. Text Summarization with Online Tools
7. Text Generation with AI
8. Discussion



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What is NLP?



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Introduction to NLP

- Natural Language Processing (NLP) enables machines to understand and respond to human language.
- Key techniques include text classification, sentiment analysis, and summarization.



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Key Applications of NLP

Everyday Applications

- Virtual assistants (e.g., Siri, Alexa)
- Spam filters
- Customer service chatbots
- Sentiment analysis of social media



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Basics of Text Classification



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Basics of Text Classification

Understanding Text Classification

- Text classification involves categorizing text into predefined categories.
- Used for spam detection, topic labeling, and sentiment analysis.



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Hands-on Activity: Text Classification



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Using Google Cloud Natural Language

Text Classification

- Access the Google Cloud Natural Language demo
- Copy and paste a text sample (e.g., customer reviews)
- Choose the appropriate classification model
- Review and discuss results

<https://cloud.google.com/natural-language#demo>



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Sentiment Analysis



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Understanding Sentiment Analysis

What is Sentiment Analysis?

- Sentiment analysis identifies and categorizes opinions expressed in text
- Used to gauge public opinion, customer satisfaction, and social media sentiment



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Hands-on Activity: Sentiment Analysis



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Using Lexalytics Demo

Sentiment Analysis

- Access the Lexalytics demo page
- Choose a sample (e.g., social media posts or reviews)
- Analyze the sentiment
- Review and discuss results

<https://www.lexalytics.com/nlp-demo/>



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Introduction to Keyword Extraction



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What is Keyword Extraction?

- Keyword extraction identifies important words and phrases within text
- Useful for SEO (Search Engine Optimization), summarization, and topic modeling



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Hands-on Activity: Keyword Extraction



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Using Keyword Extractor

Keyword Extraction

- Access the Keyword Extractor page
- Copy & paste text
- Extract keywords
- Review and discuss results

<https://wordcount.com/keyword-extractor>



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Summarizing Text



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Techniques for Summarizing Text

Text Summarization

- Text summarization condenses text into a shorter version, capturing the main points.
- Two main types: extraction-based summarization and abstraction-based summarization.



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Hands-on Activity: Text Summarization



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Using TLDR This

Text Summarization

- Access TLDR This
- Copy and paste a lengthy article or document
- Generate a summary
- Review, refine, and discuss the summary

<https://www.tldrthis.com/>



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Text Generation with AI



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Understanding Text Generation

Text Generation with AI

- **Language Models:** AI language models like GPT-3 are designed to generate coherent text based on input prompts. By understanding context and predicting subsequent words, these models can create human-like narratives.
- **Applications:** Text generation can be used for a wide range of applications, including creative writing, drafting emails, generating reports, and even creating conversational agents.
- **Limitations:** Despite their capabilities, AI-generated text can sometimes be misleading, incorrect, or nonsensical. It's important to use these tools with an understanding of their limitations and review the generated content critically.



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Hands-on Activity: Text Generation



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Generating Text Using ChatGPT

Text Generation

- Access ChatGPT
- Input a prompt that you'd like the AI to expand upon. For example, 'Write a short story about a robot learning to paint.'
- Review the generated text and discuss its creativity, coherence, and potential applications.



<https://chat.openai.com/>



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Generating Text Using Claude

Text Generation

- Go to the Claude website
- Input a prompt that you'd like the AI to expand upon. For example, 'Explain the benefits of AI in healthcare.'
- Review the generated text and discuss its creativity, coherence, and potential applications.

<https://claude.ai/>



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Discussion points

Text Generation with AI

- How accurate and relevant was the generated text to your prompt?
- In what real-world scenarios could this tool be useful?
- What were some limitations or surprises in the generated text?
- How to make sure that the text is reliable and factual?



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Thank you



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