

# Prompt Engineering

LLM course, UW, Seattle

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# ChatGPT use cases for NLP

**Prompt Engineering for information  
retrieval**

**Data Augmentation**

**Transfer Learning to smaller  
models**

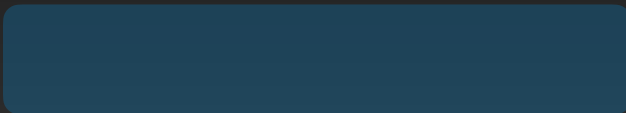


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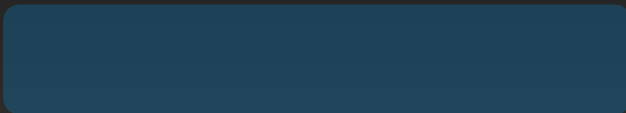


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**More use cases!**

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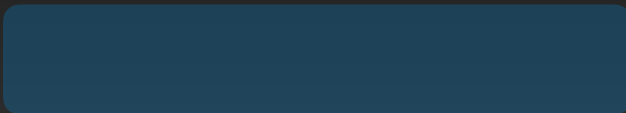
**Open AI embeddings for Semantic  
Search**

# Today's Focus

**Prompt Engineering for information  
retrieval**

**Data Augmentation**

**Transfer Learning to smaller  
models**





# Prompt Engineering - Notebook Demo

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**Let's go take a look!**

# Pointers for effective prompt engineering

**Clarity in Instructions, Goals**

**Providing context**

**Specificity/Conciseness**

# Pointers for effective prompt engineering

**Clarity in Instructions, Goals**

**Providing context**

**Specificity/Conciseness**

## **Example from the notebook**

**The key word doesn't have to be present in  
the text. Also the key word shouldn't have a  
space in it.**

# Pointers for effective prompt engineering

**Clarity in Instructions, Goals**

**Providing context**

**Specificity/Conciseness**

# Pointers for effective prompt engineering

Clarity in Instructions, Goals

Providing context

Specificity/Conciseness

## Example from the notebook

One question should be something a five year old would ask. Another second should be something a mature adult would ask.

# Pointers for effective prompt engineering

**Clarity in Instructions, Goals**

**Providing context**

**Specificity/Conciseness**

# Pointers for effective prompt engineering

Clarity in Instructions, Goals

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Specificity/Conciseness

## Example from the notebook

**Generate 3 distinct key words that capture  
the most important topics in the text.**

# Pointers for effective prompt engineering

Clarity in Instructions, Goals

Providing context

Specificity/Conciseness

Chain of Thought Prompting

## Example from the notebook

Explain step by step. Use of <think> tags and  
<answer> tags



# Pointers for effective prompt engineering

Clarity in Instructions, Goals

Providing context

Chain of Thought Prompting

Specificity/Conciseness

In-Context Learning

ICL

Zero-shot vs Few-shot in-context learning

# Pointers for effective prompt engineering

Clarity in Instructions, Goals

Providing context

Chain of Thought Prompting

Specificity/Conciseness

**In-Context Learning vs RAG Models**

## ICL vs RAG

In In-context Learning - All data is provided within the context window.

In RAG - First a database of docs is searched before generation from a single relevant doc