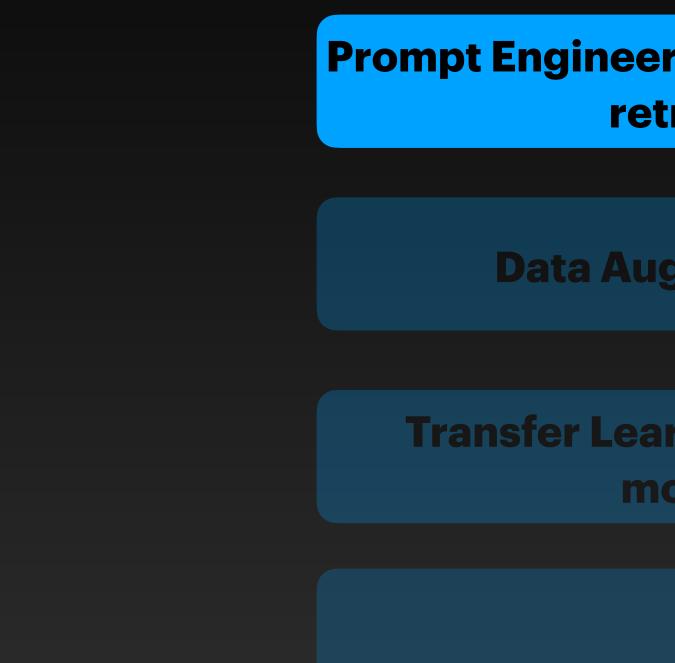
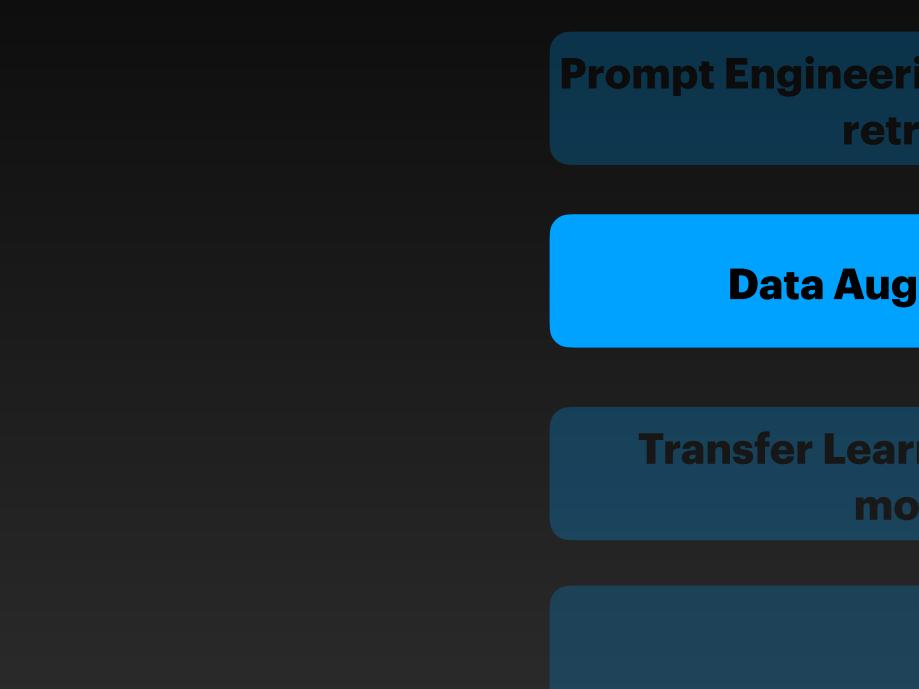
# Prompt Engineering LLM course, UW, Seattle

Dr. Karthik Mohan



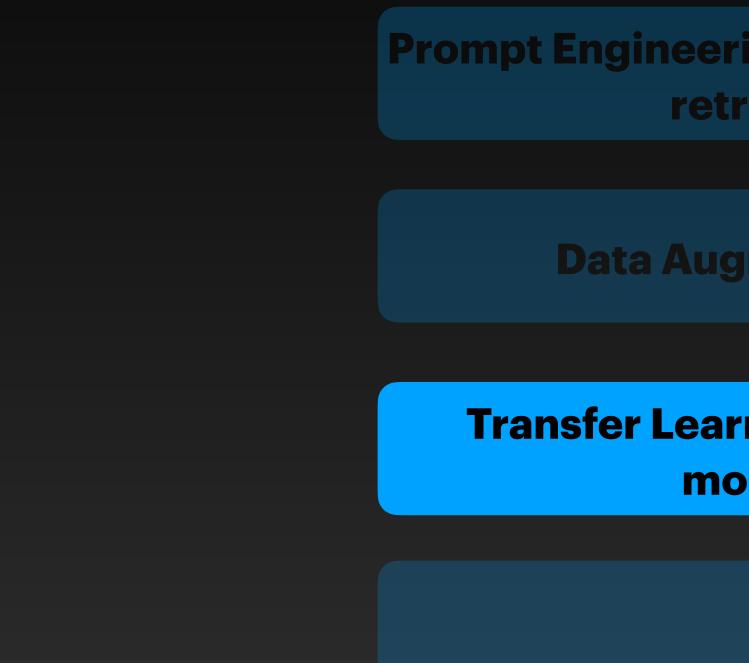
Prompt Engineering for information retrieval

**Data Augmentation** 



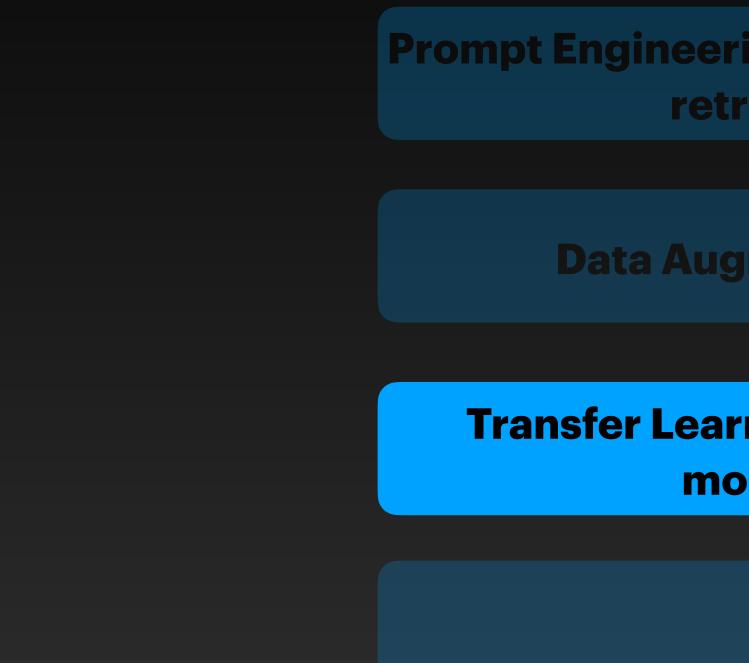
Prompt Engineering for information retrieval

**Data Augmentation** 



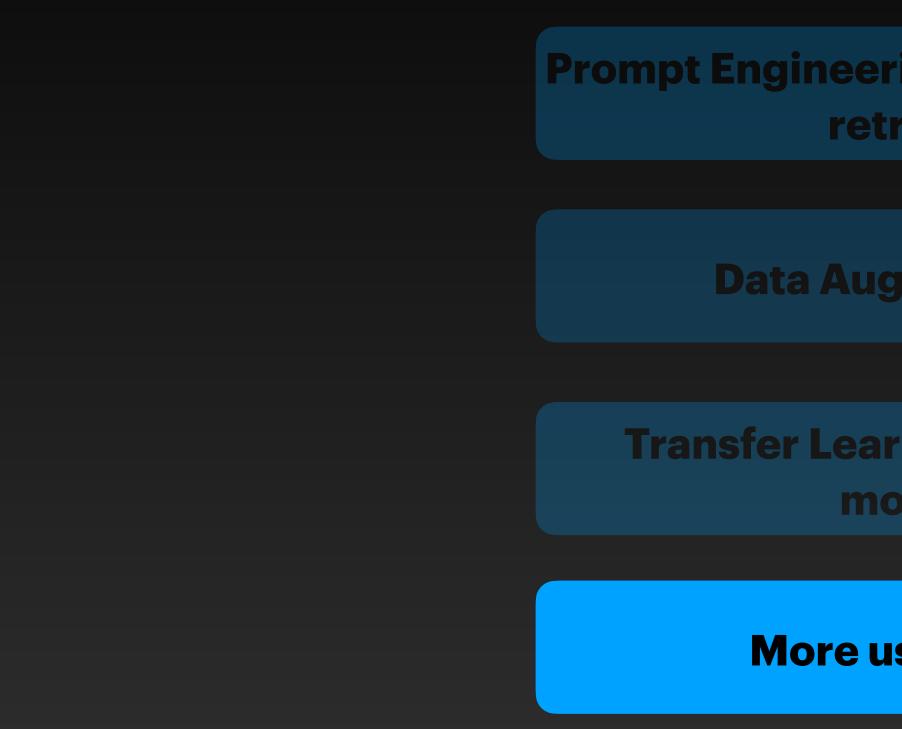
Prompt Engineering for information retrieval

**Data Augmentation** 



Prompt Engineering for information retrieval

**Data Augmentation** 



Prompt Engineering for information retrieval

**Data Augmentation** 

Transfer Learning to smaller models

**More use cases!** 

**Transfer Learning to smaller** models

**Open AI embeddings for Semantic** Search

**Prompt Engineering for information** retrieval

**Data Augmentation** 



**Data Augmentation** 

**Transfer Learning to smaller** models

**Prompt Engineering for information** retrieval

### **Prompt Engineering - Notebook Demo**

Let's go take a look!

**Clarity in Instructions, Goals** 

**Providing context** 

**Specificity/Conciseness** 

**Clarity in Instructions, Goals** 

**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.

**Clarity in Instructions, Goals** 

**Specificity/Conciseness** 

**Clarity in Instructions, Goals** 

**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.

**Clarity in Instructions, Goals** 

**Specificity/Conciseness** 

**Clarity in Instructions, Goals** 

**Specificity/Conciseness** 

#### **Example from the notebook**

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

**Clarity in Instructions, Goals** 

**Specificity/Conciseness** 

#### **Example from the notebook**

**Providing context** 

**Chain of Thought Prompting** 

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

**Providing context** 

**Specificity/Conciseness** 

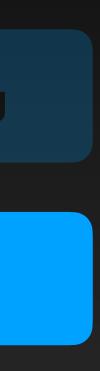
#### Zero-shot vs Few-short in-context learning



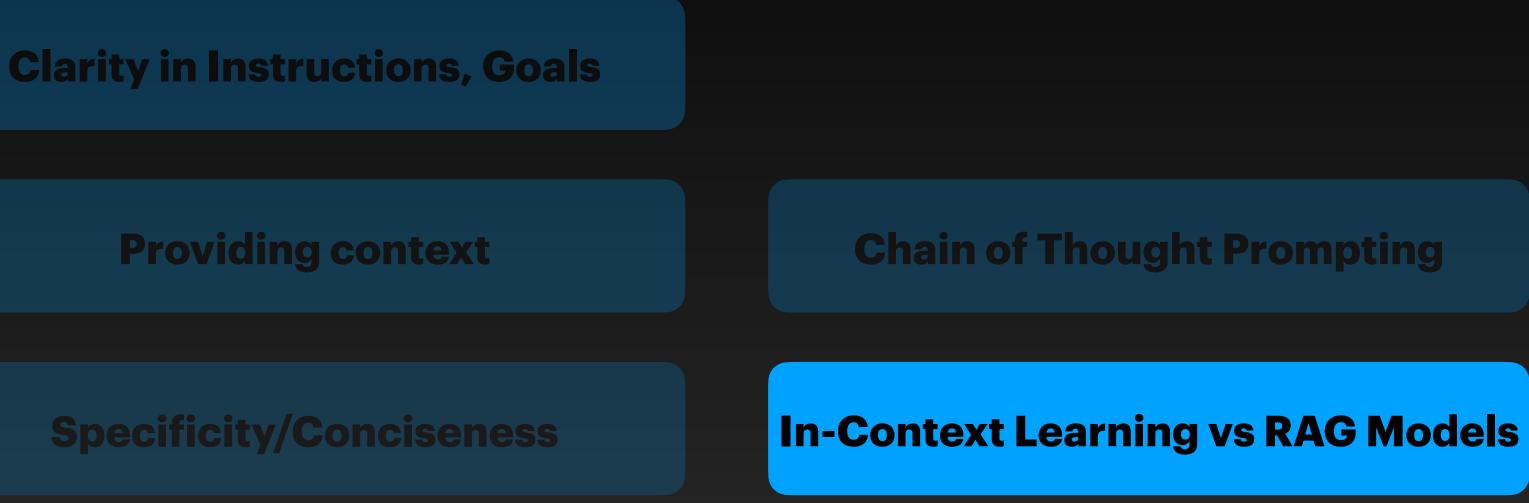
**Chain of Thought Prompting** 

**In-Context Learning** 

#### ICL



#### **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

