

AI in Research – Introduction and Exercises

Rachel Ellis, Dr. Manfred Nölte
State and University Library Bremen (SuUB)



Survey 1 -- Your AI experience

Anonymous • 4 questions

Language: English

1. What is your level of 'AI experience'?

☐ No experience

☐ Beginner

☐ Intermediate

☐ Advanced

2. Have you already paid for AI services?

☐ Yes

☐ No

3. How many of these nine terms do you know well?

COMMON TERMS: Multimodal AI, Prompt, System Prompt

MORE TERMS: Transformer, Token, Word Embedding

TECHNICAL TERMS: Fine-tuning, Inference, RAG (Retrieval Augmented Generation)

1 - 3

4 - 6

7 - 9

What are your plans to use AI?

https://uni-bremen.zoom-x.de/survey/Je8KkdKBF9l3-F4vmsb_BMvlok_47DfWGP1tQRUtHEZ0_uQDI2w.lblz84ujdl-DRDW/view?id=diSmX5BBSC2g9bJZeSVIYQ#/sharePreview

- What is your level of AI experience so far?
- What is your main interest in Artificial Intelligence?

Introduction – AI Models (Companies)

Google

DeepMind

Gemini

NotebookLM



MISTRAL
AI_



LLaMA
by  Meta



Fraunhofer

IAIS



open

GPT-X

Teuken-7B



OpenAI



GitHub Copilot



ChatGPT



deepseek



Napkin
beta



perplexity



ALEPH ALPHA



DuckDuckGo



Duck.ai



Grok

ANTHROPIC



Claude

Introduction – Overview II

Leaderboards

- Hugging Face (<https://huggingface.co/>)
 - European LLM Leaderboard
<https://huggingface.co/spaces/openGPT-X/european-llm-leaderboard>
 - Open LLM Leaderboard
https://huggingface.co/spaces/open-llm-leaderboard/open_llm_leaderboard#/
- LLM Arena
 - <https://lmarena.ai/>
- Vellum.ai
 - <https://www.vellum.ai/llm-leaderboard>
Good: cost per million tokens, context window size
- (not a leaderborad) DeepSeek
 - <https://www.deepseek.com/>