

LLM Hands-on Session

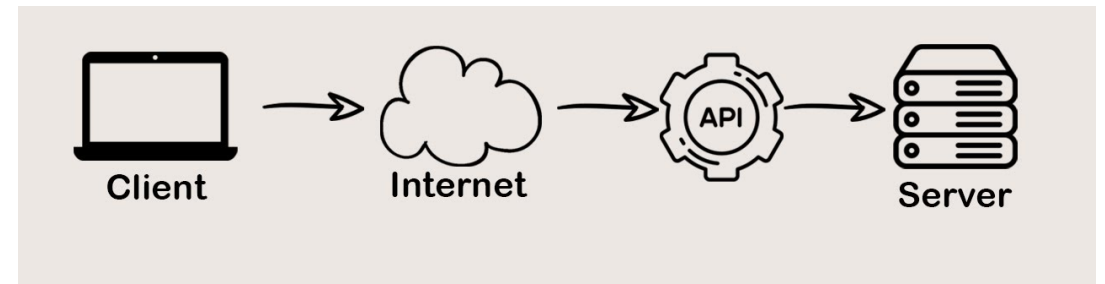
Mohannad Elhamod – IS883

Using LLM APIs

What is an API?

An Application Programming Interface (API) establishes a “contract” or “glue” that allows multiple pieces of software to communicate.

- Standardizes software development.
- Allows integration with online services.
- Is generally well-documented.



[CodeWithMazn](#)

LLM APIs

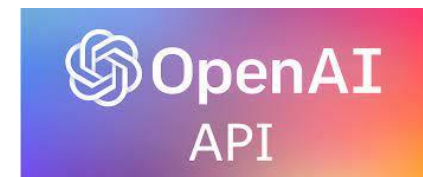
APIs that provide access to LLMs:

- You send a query/request (e.g., a prompt or a sentence)
- You get a response (e.g., a summary or a translation)



Why LLM APIs (vs. in-house)?

- Pros?
 - Less memory and compute resources needed.
 - Abstraction in terms of maintenance and updates.
 - Security?
- Cons?
 - Less control.
 - Maybe slower.
 - Cost.
 - Privacy.



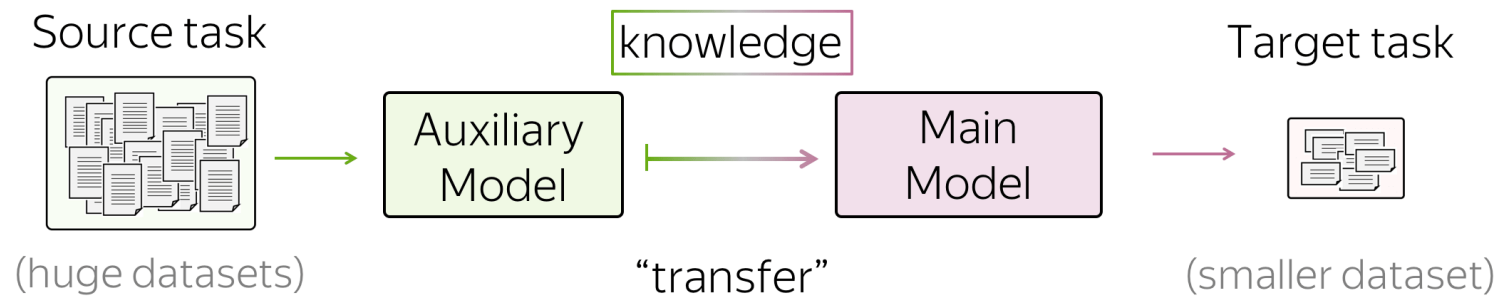
OpenAI API

- [Documentation](#)
- [Playground](#)
- [Guide](#) ([notebook](#))
- [Pricing](#)

Fine-tuning

What is Fine-tuning?

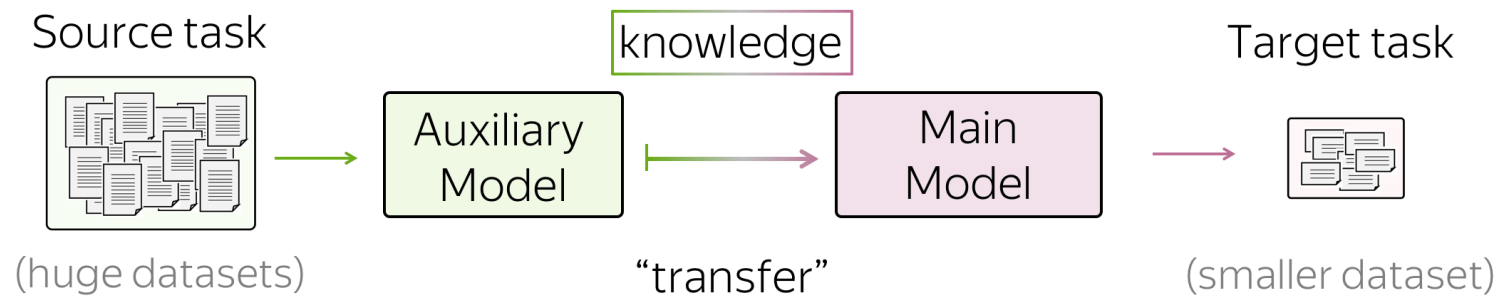
Given a pre-trained model A trained on dataset 1, one can fine-tune the model to work on a similar dataset 2.



[Lena-volta](#)

What is Fine-tuning?

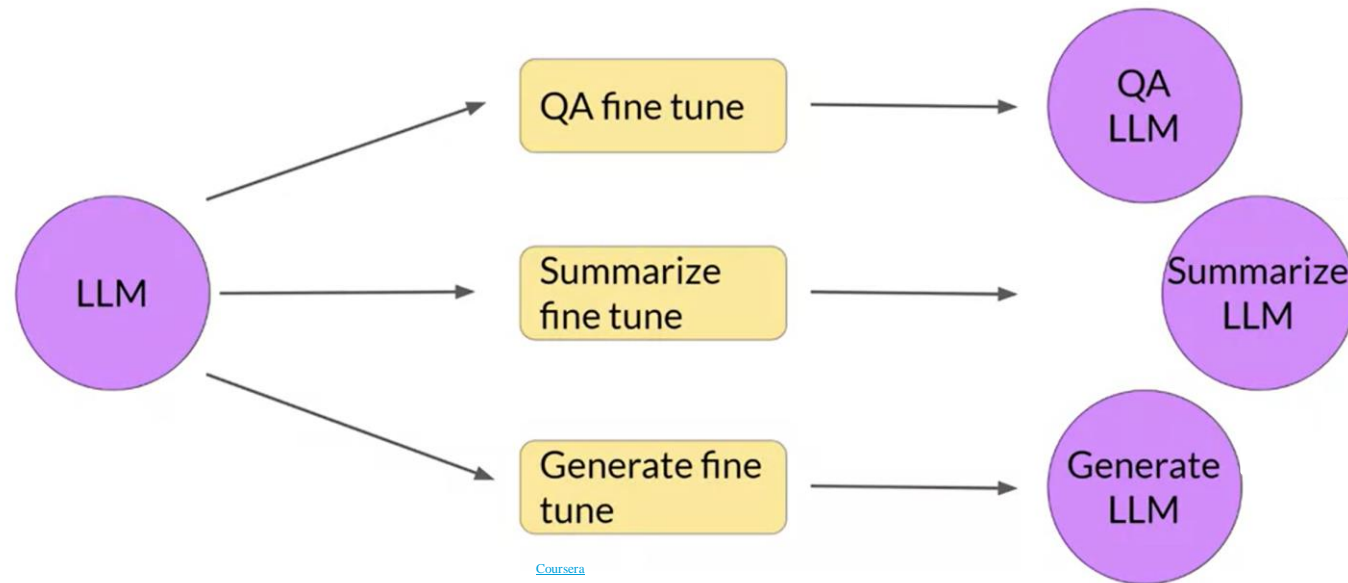
- Saves on training time.
- Saves on cost and resources.
- Improves results.



[Lena-volta](#)

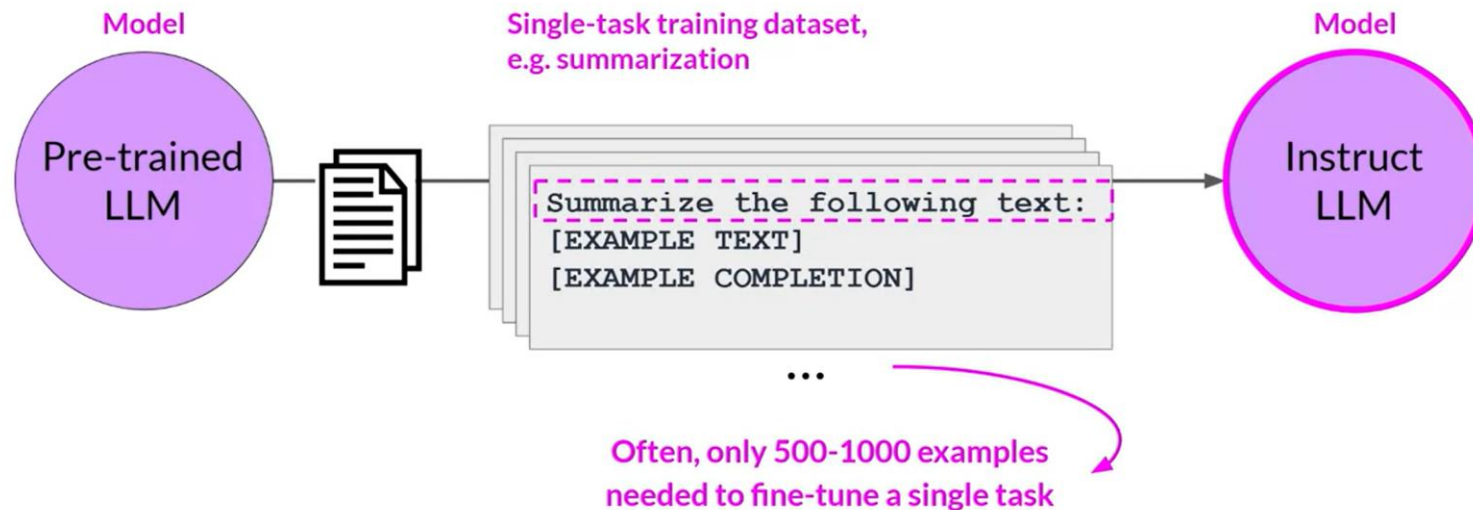
Transfer learning

You can learn a model on **Task A** and “transfer” that knowledge to **Task B** using fine-tuning.



Transfer learning

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[Coursera](#)

Demo

[Using a language model for Yelp reviews](#)