



20<sup>th</sup> Ermoupoli Seminar  
Information Society and Knowledge Economy

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# Unlocking the AI Black Box

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# Open

# What is “Open”?

- “Open”
  - Open Source software: Free Software / FOSS
  - Open hardware
  - Open data
  - Open standards
  - Open processes
  - Open knowledge
- “Open washing”

# Software

- Open Source
  - OSD: Open Source Definition by OSI
    - Ten criteria
- Free Software
  - Free Software Definition by FSF
  - Four Freedoms
    - Run; Study and change; Redistribute; Redistribute modified

But AI is a different beast...



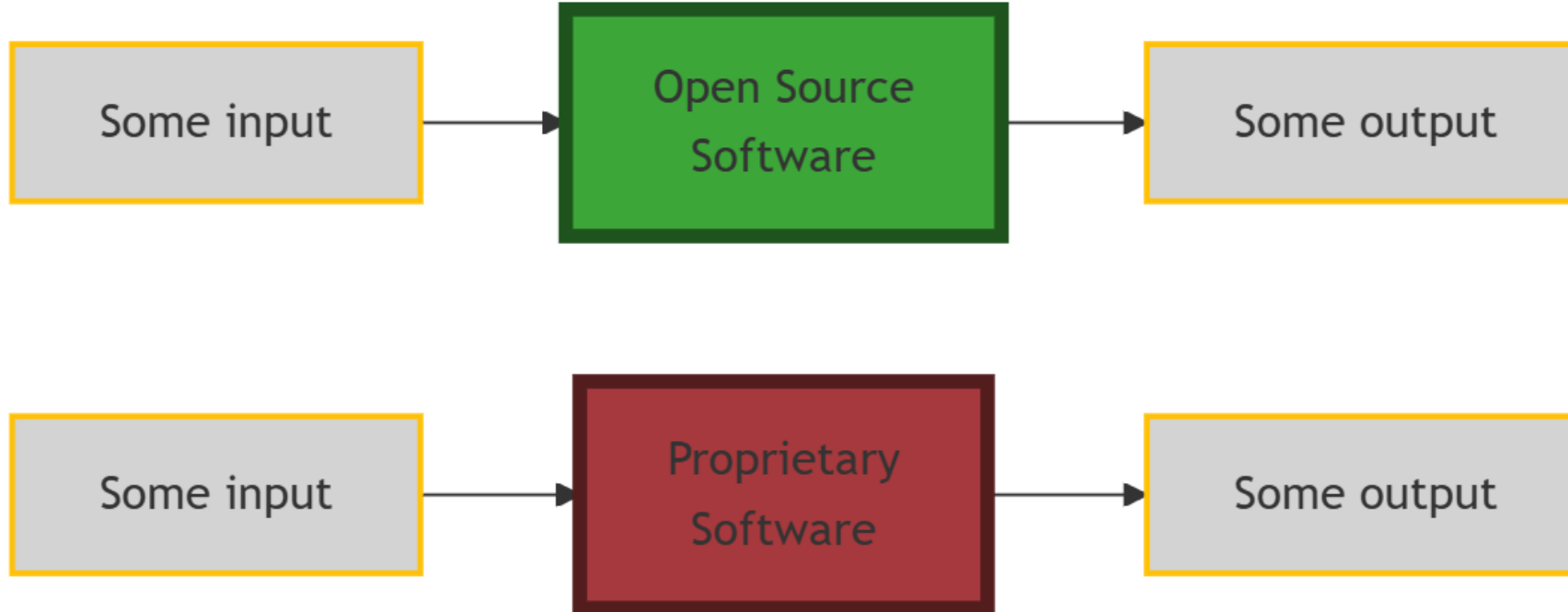
# Tech reminder course

AI Software Architecture

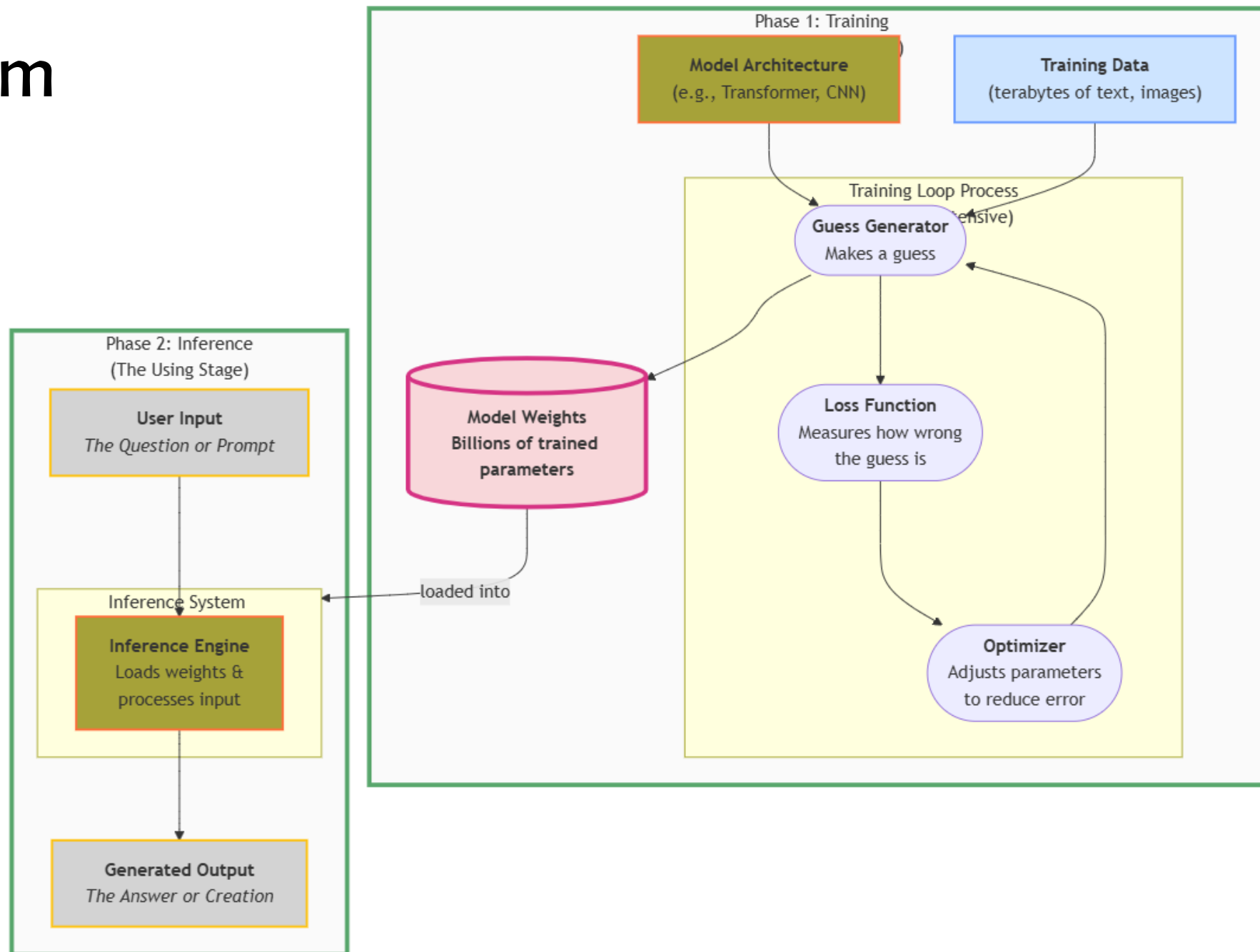
# “Traditional” software



# “Traditional” software



# “AI” system





# More than “Software”

**1**

Model Software

**2**

Inference Software

**3**

Training Data

**4**

Model Weights

# What has to be “Open”?

## Software

- Two distinct pieces
  - Model architecture
  - Inference
- The only “known” part, same as “traditional”
- Are both needed?

## Training data

- More important than software
- Under open licenses?
- “Fair use”

## Weights

- Simply numbers
  - Copyrightable?
- Modifiable?
  - “Preferred mode for modification”

# Current “open” systems

- Inference software under FOSS license
- Training software often under FOSS license
- Weights under custom licenses
  - Typically allow redistribution
  - Often restrict use
  - Initially very malformed custom licenses
- Training data
  - Texts (books, ...)
    - Provenance legally dubious
  - Source code (FOSS)
    - Disregard license

# Legal basis

- Nothing known
- Nothing decided (yet)
- Many lawsuits in progress
  - Mainly about training data: use, acquisition, ...
- Anthropomorphizing AI does not help
- No legal framework (yet?)
  - Some countries (jurisdictions) are thinking about “innovating”
- Wait and see...

# Community understanding

- Definitely no consensus
- Various efforts to define “Open AI”
  - Open Source Initiative (OSI)
    - Published Open Source AI Definition (OSAID v1)
  - Linux Foundation (LF)
  - Free Software Foundation (FSF)
  - ...
- More time (and work) needed

# How will it play out?

- More time and work needed

vs

- Market push to “Everything AI”
  - ~~“Move fast and break things”~~ or ~~“Don’t Be Evil”~~
  - “Release early and ignore everything”
- “Too big to fail” ?
- Abolishment of copyright?



# Does it matter?

“Participants warned that the growing use of AI has given rise to new risks and ethical considerations related to bias, transparency, privacy, and existential threats to humanity. [...]

The consensus is that openness in AI provides a better pathway to addressing AI’s weaknesses and challenges.”

OS Congress report, July 2023



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