

What is a Large Language Model?

Instructor

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Large

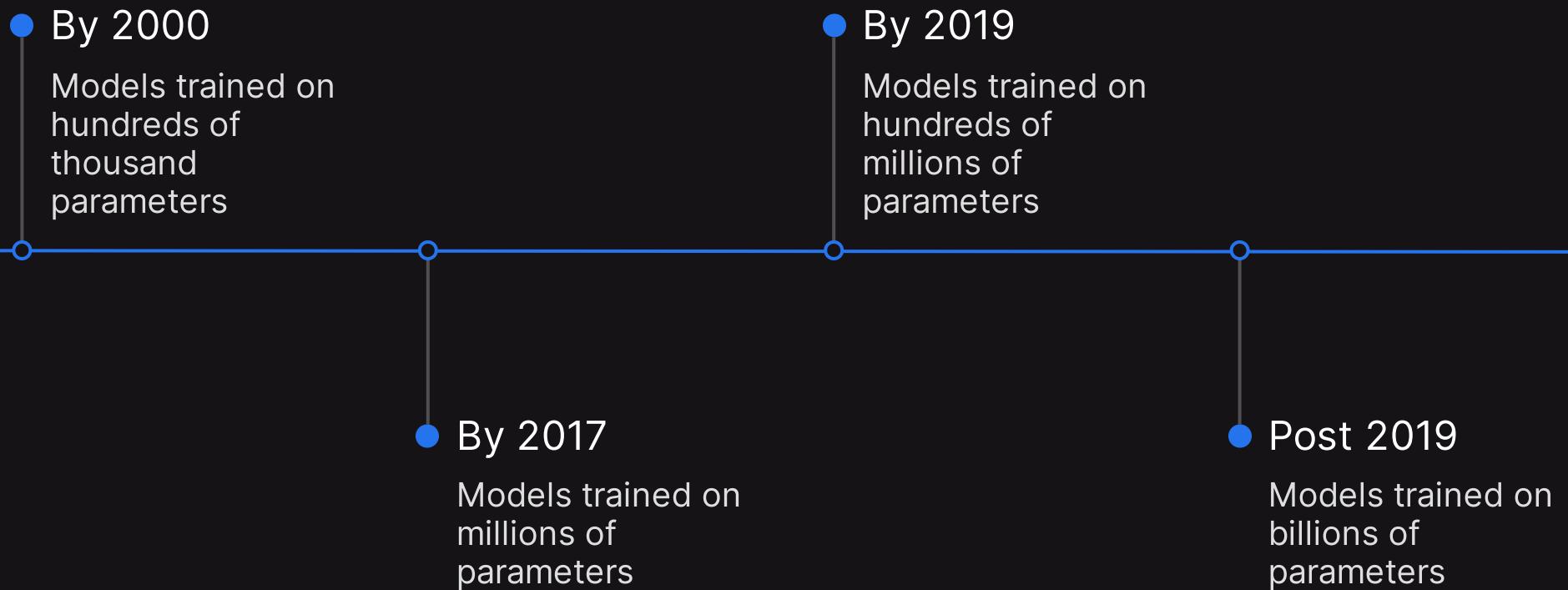
Language Model

Large

Language Model

Timeline of Model Size

Earlier Language Models were trained on smaller datasets leading to fewer parameters.

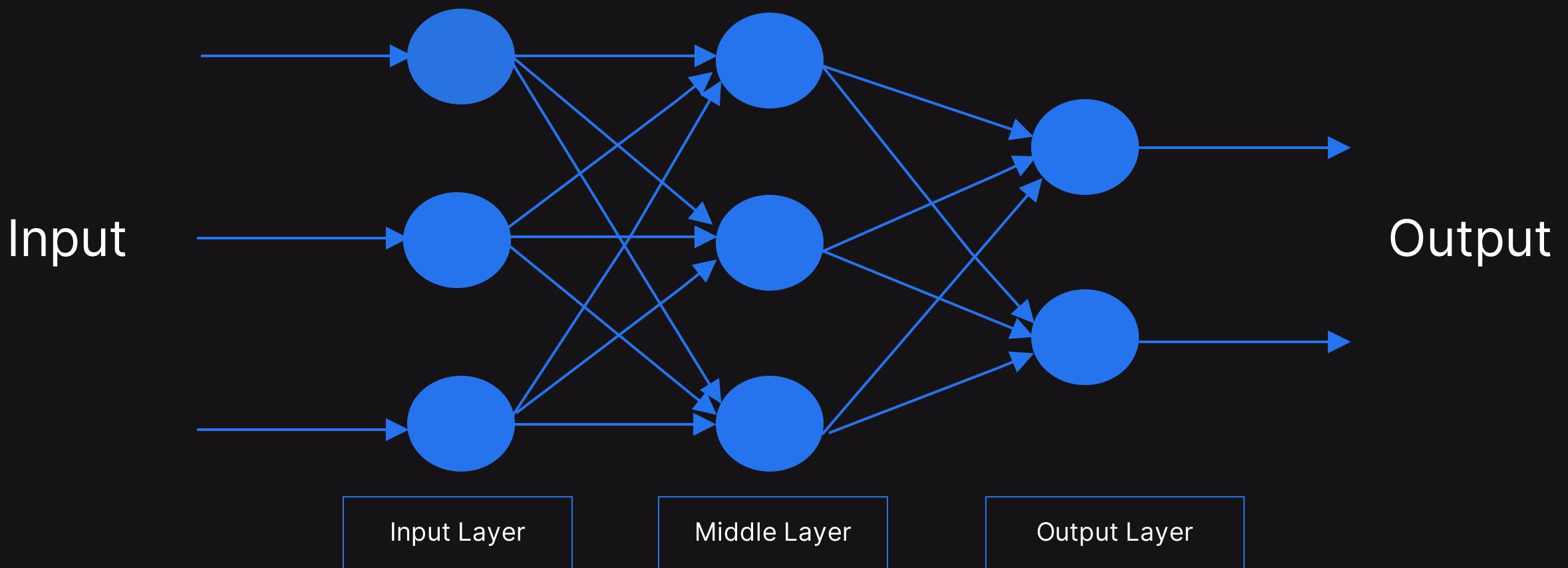


What are
Parameters?

Weights & Biases

What are Parameters?

Neural networks learn the mapping between inputs and outputs through parameters



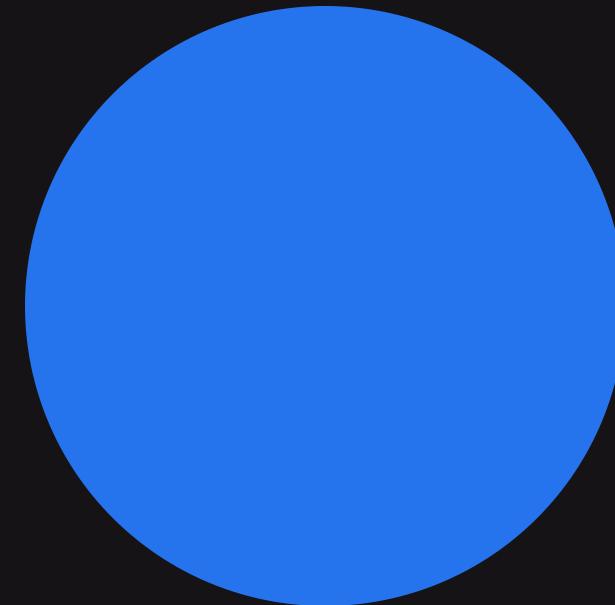
Language Models vs Large Language Models

For Neural Language Models released in 2003, the number of Parameters was in the range of millions.

Language Model
(Millions)

Language Models vs Large Language Models

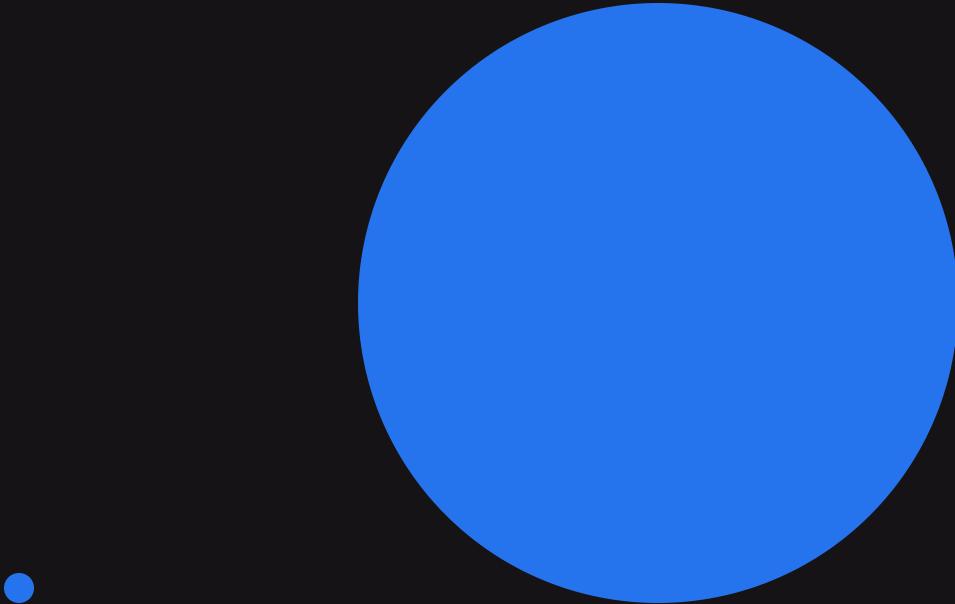
Large Language Models
as of today contain
billions of parameters.



Large Language Model
(Billions)

Language Models vs Large Language Models

Language models gain intelligence with an increase in the size of training data and no. of parameters.

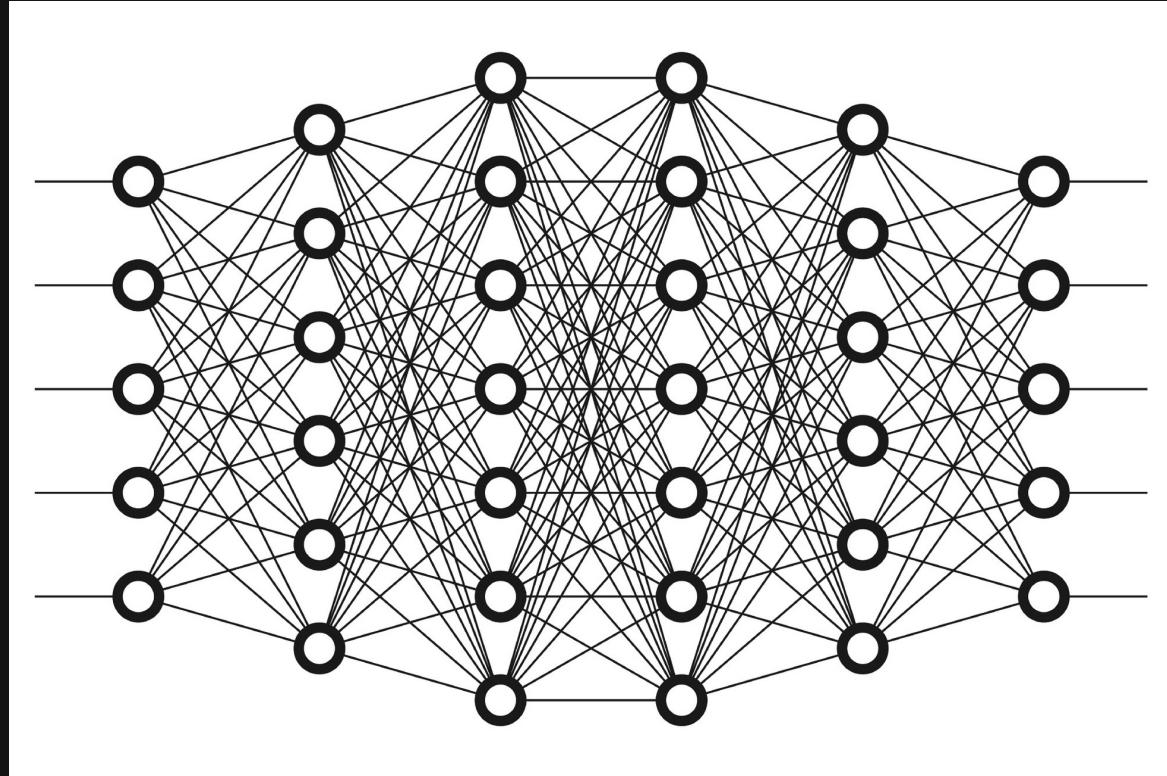


Language Model
(Millions)

Large Language Model
(Billions)

Language Models vs Large Language Models

The representation of inputs gets better with the increase in the depth of the network



What does “Large” represents in LLMs?

Large refers to:

Large size of training dataset

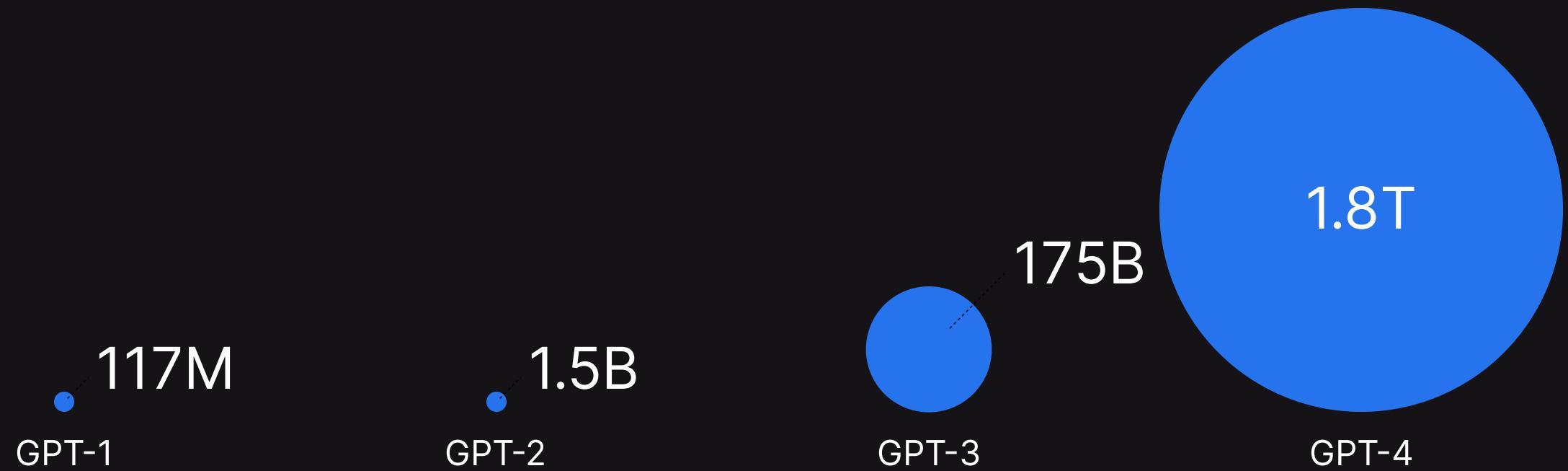
Large number of parameters

What is a large language model?

Large language model contains an enormous number of parameters trained on massive datasets.



GPT and its evolution



Large language models gain emergent capabilities as they get bigger in terms of model and training data.

Emergent Properties

Emergent abilities are the set of properties that a model inherits during a training process.



GPT-3 is trained to predict the next word but can solve different tasks through completion.

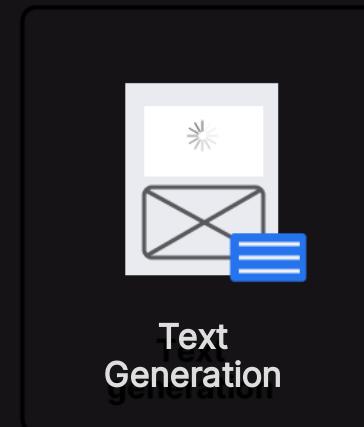
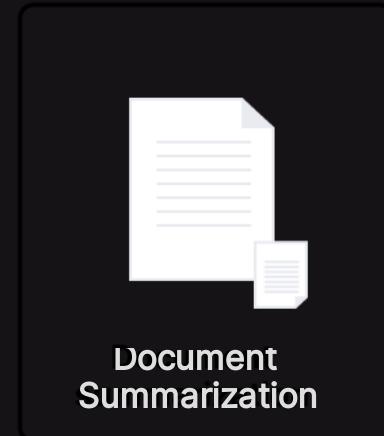
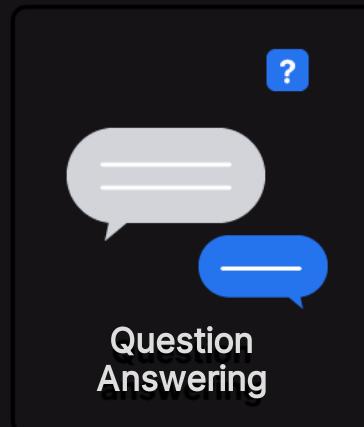
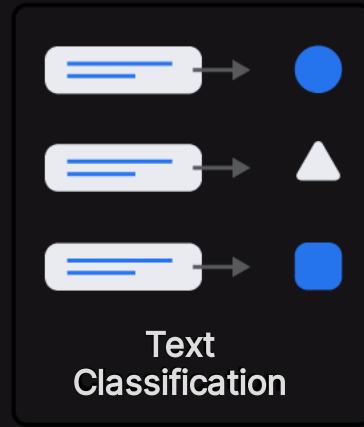
Emergent Properties

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Use cases of LLMs



LLMs belong to class of foundation models

Thank You
