

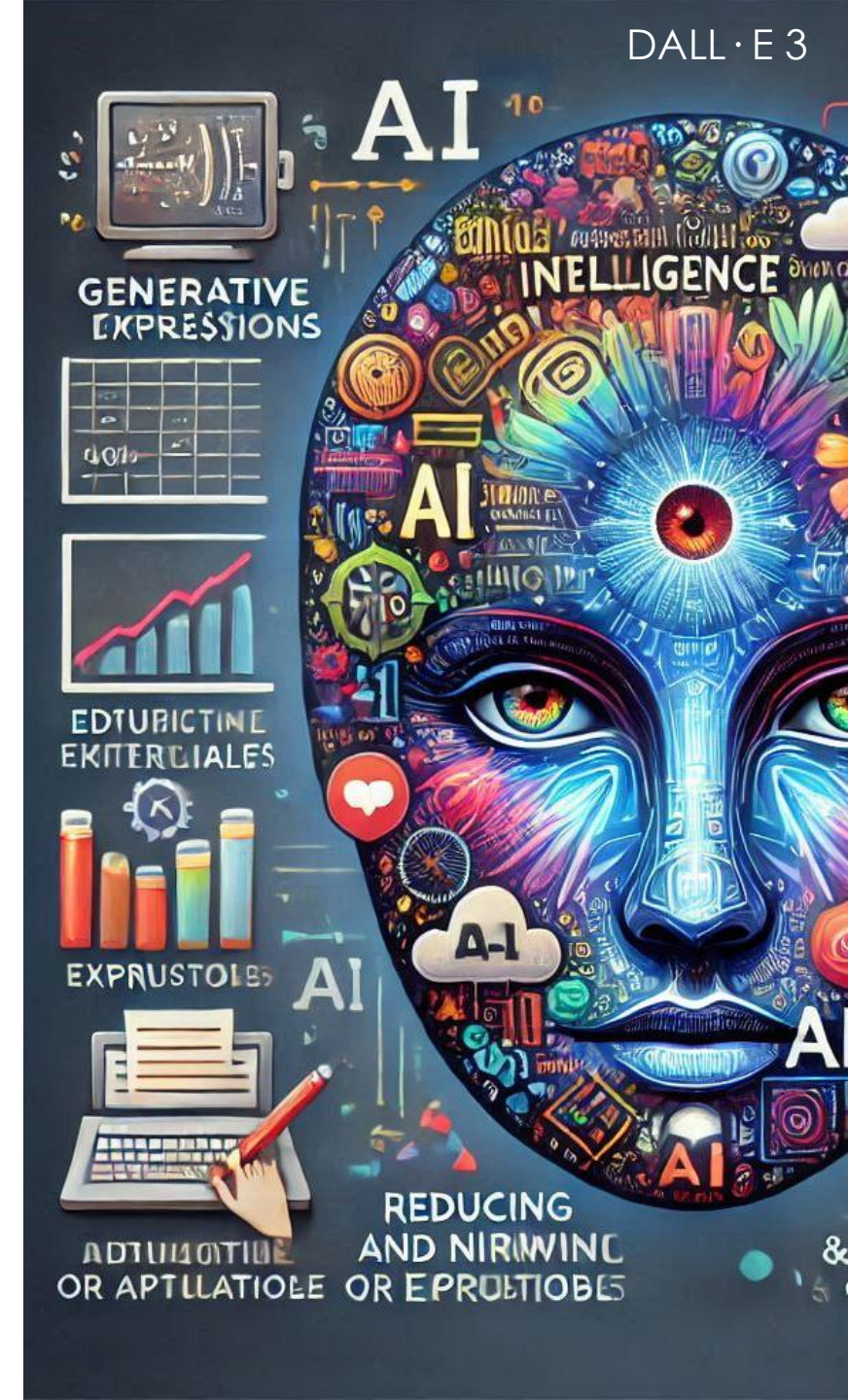


DEFINITIONS OF  
ARTIFICIAL INTELLIGENCE

## Definitions of artificial intelligence

**There is no universally accepted definition of artificial intelligence.** However, below are some common ways to define artificial intelligence:

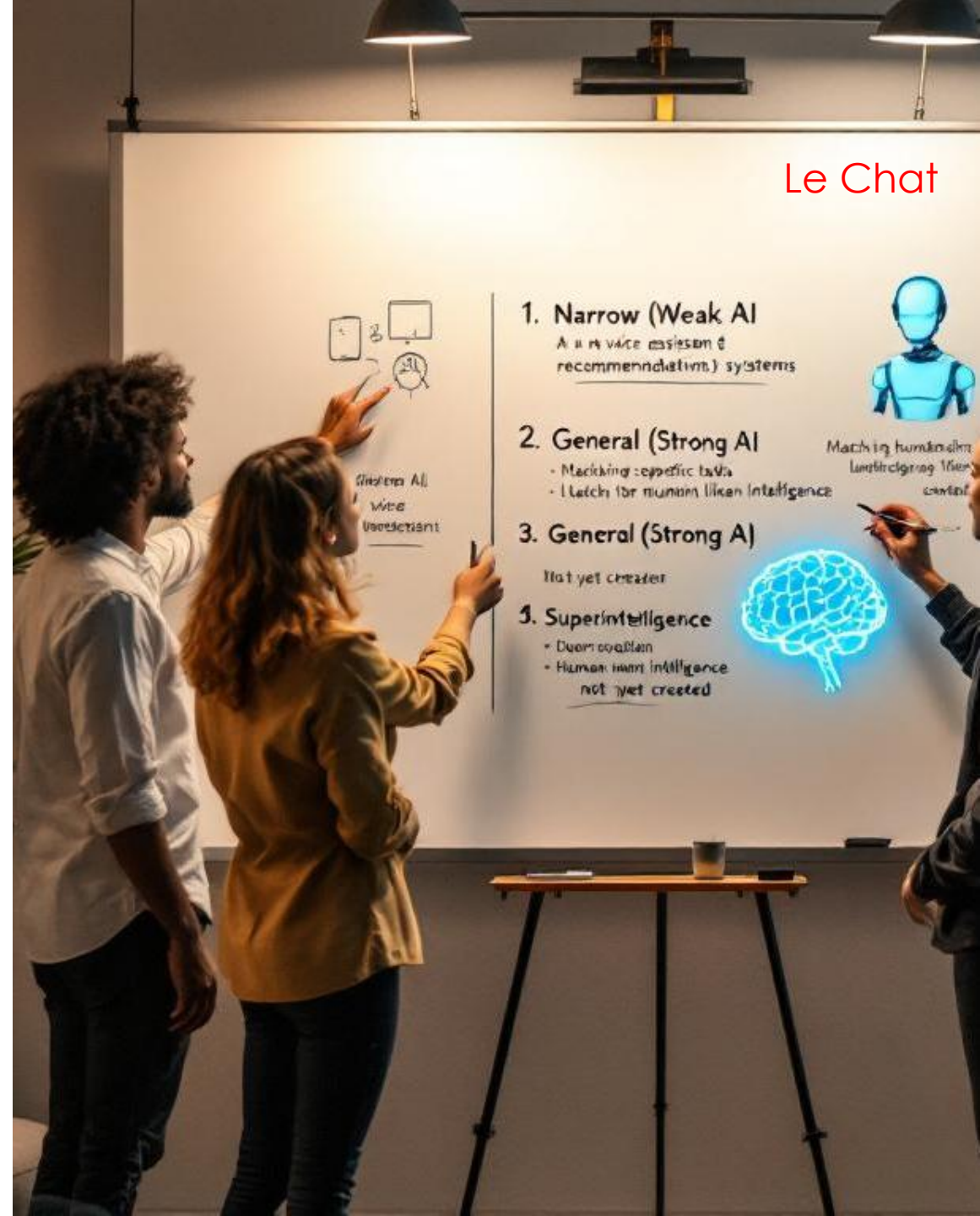
- 1. An application is AI if it works like human intelligence.** Applying this definition would require us to understand how human intelligence works. We do not yet have this understanding.
- 2. An application is AI if it appears to an external observer to act like human intelligence,** i.e. the observer cannot tell whether the interlocutor is a human or a machine. This is the idea on which the Turing test is based.
- 3. An application is AI if it performs tasks that are generally considered to require intellect.** The challenge with this definition is that we should first define which tasks require intellect.



# Classification of AIs

AI applications are often classified into three categories:

- **Artificial Narrow Intelligence (ANI)** performs limited tasks defined for it. Narrow AI does not have human-like intellect, consciousness, or its own will. All current AIs are narrow AI.
- **Artificial General Intelligence (AGI)** is equivalent to human intelligence. General AI does not yet exist.
- **Artificial Super Intelligence (ASI)** surpasses human intelligence. Super AI does not yet exist.



## Artificial intelligence in this presentation

**This presentation does not take a stand on the definition of artificial intelligence, but it focuses on neural network-based artificial intelligence.** This is because neural networks have enabled the development of artificial intelligence to the current level. Thus, today, artificial intelligence typically refers to neural network-based applications.

Understanding how a neural network works is also the key to understanding how artificial intelligence works. Therefore, this topic has been presented relatively accurately in the presentation. However, the listener or reader should not be startled by this, as the operation of a neural network is actually surprisingly simple.

