ThoughtViz Visualizing Human Thoughts Using Generative Adversarial Network

Analyze brain activity, recorded by an ElectroEncephaloGram (EEG), of a subject while thinking about a digit, character or an object and synthesize visually the thought item.

Deep learning approaches:

* Generative Adversarial Network (GAN) (used here)
* Variational autoencoders
* Autoregressive models

A traditional GAN architecture consists of two main components, a generator (G) and a discriminator (D).

A generator is used to generate a sample image from a random noise input (z), and the discriminator takes this generated sample as input and determines whether it is a generated sample or a real sample.

Discriminator is trained so that it can distinguish between fake samples and real samples.

Goal of the generator is to fool the discriminator.