Csapó Tamás Gábor

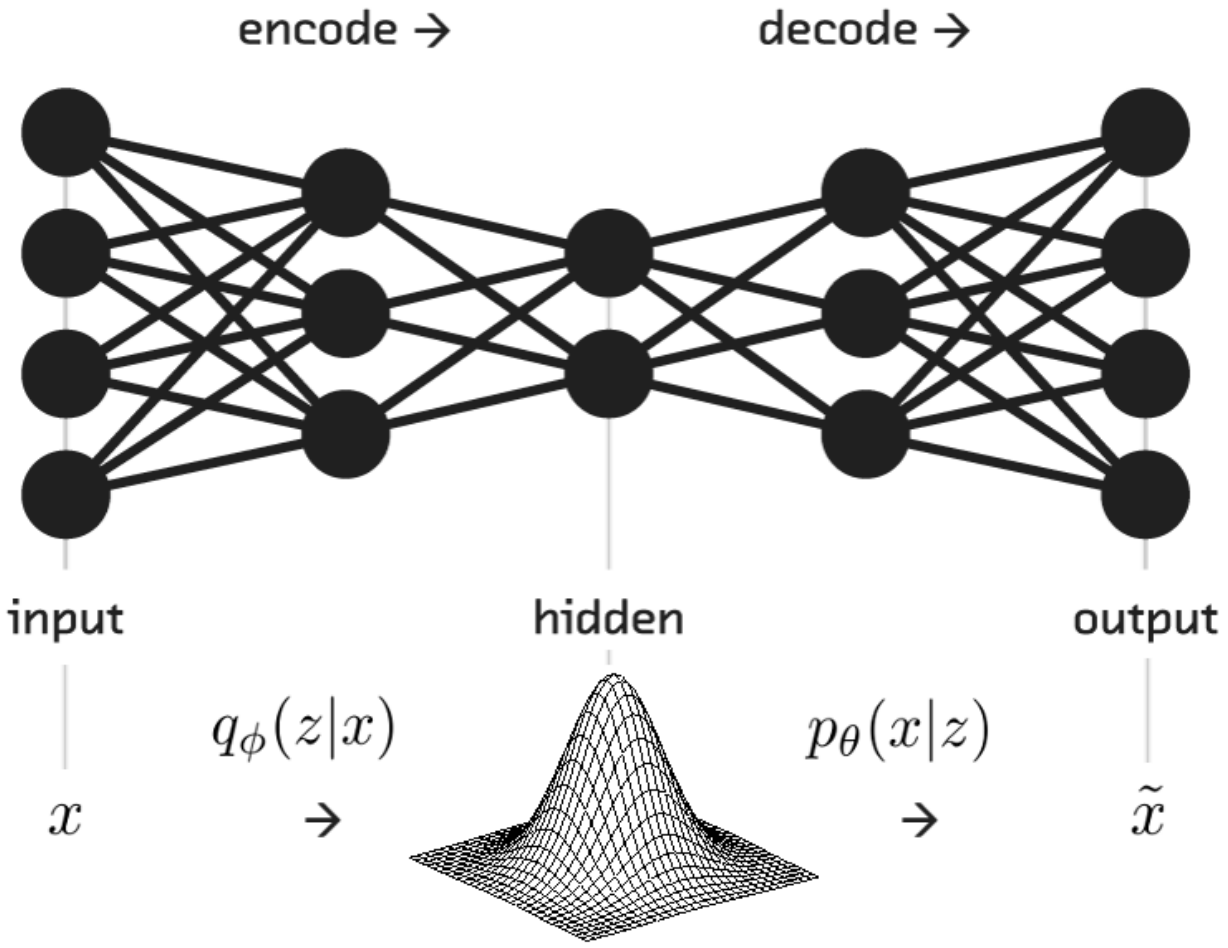
Deep Learning a gyakorlatban Python és LUA alapon

GAN gyakorlat

NVidia Deep Learning Institute workshop

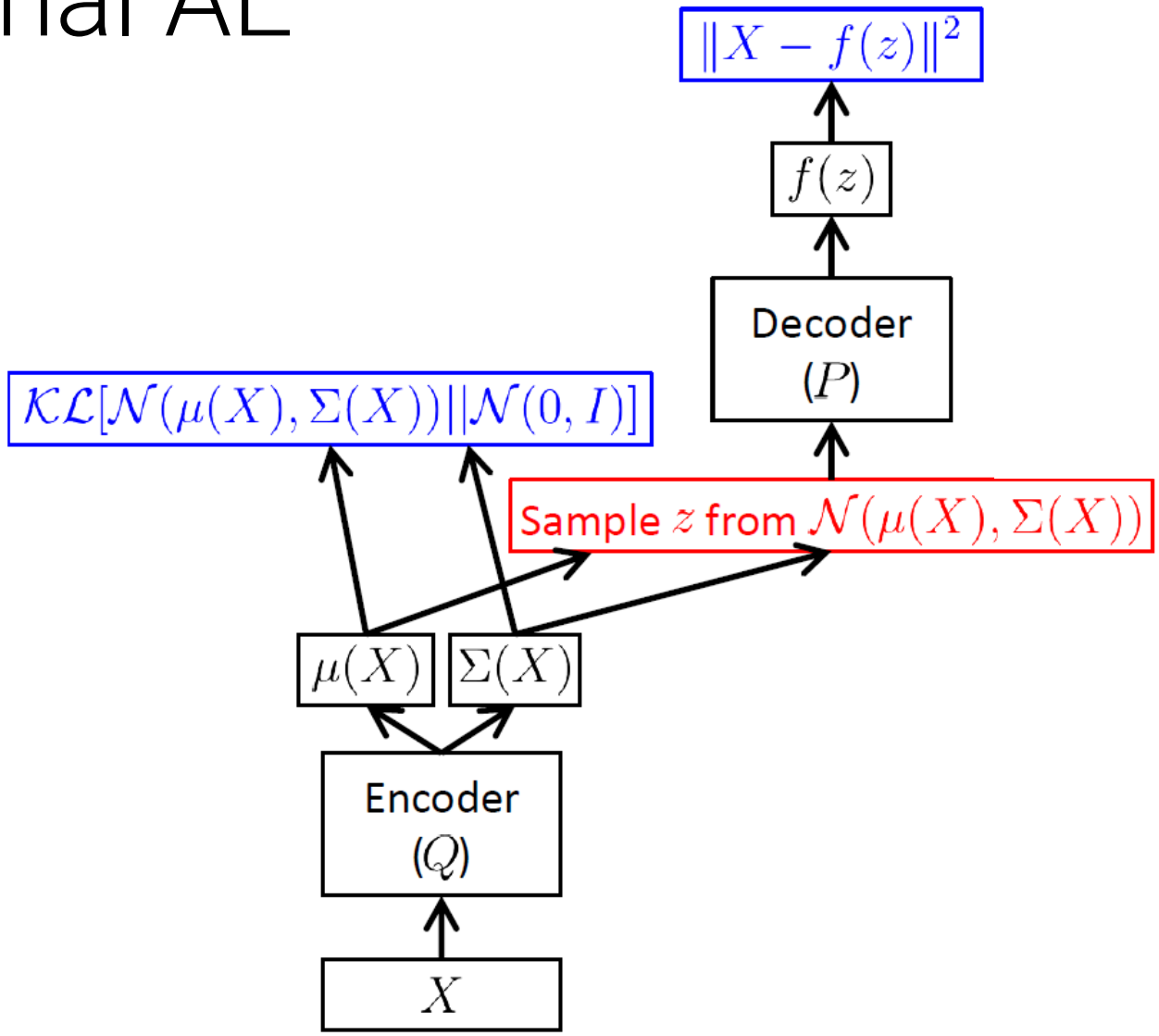
- 2020. dec. 17.
- Transformer-based NLP applications
- https://www.eventbrite.com/e/nvidia-dli-workshop-building-transformer-based-nlp-applications-tickets-131162752323

Variational AE



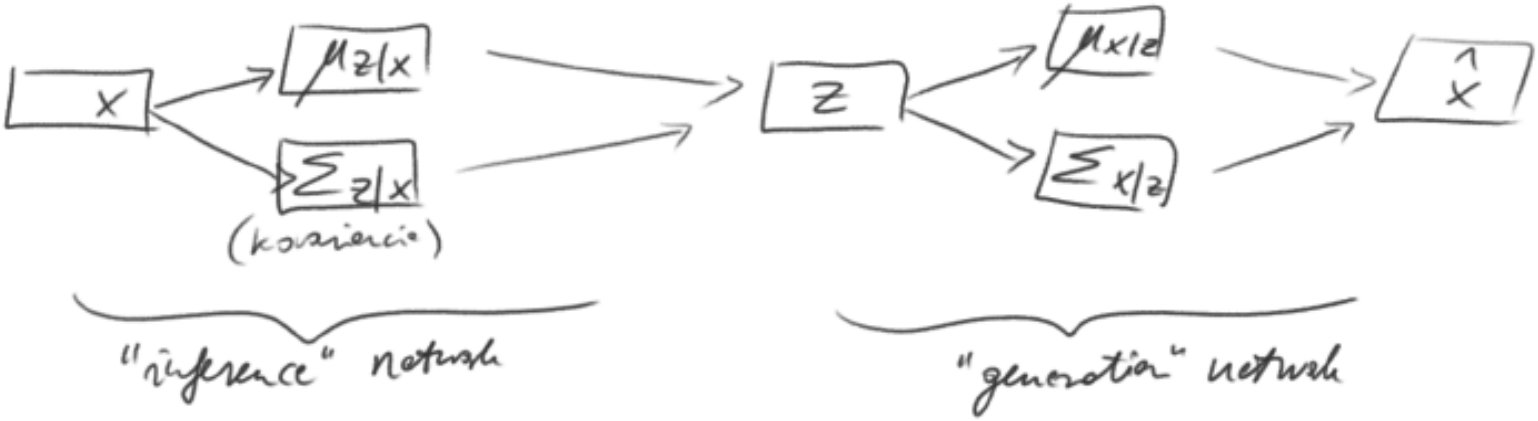
Forrás: http://blog.fastforwardlabs.com/2016/08/22/under-the-hood-of-the-variational-autoencoder-in.html

Variational AE



Forrás: Carl Doersch, Tutorial on Variational Autoencoders , https://arxiv.org/abs/1606.05908

Variational AE – Onenote



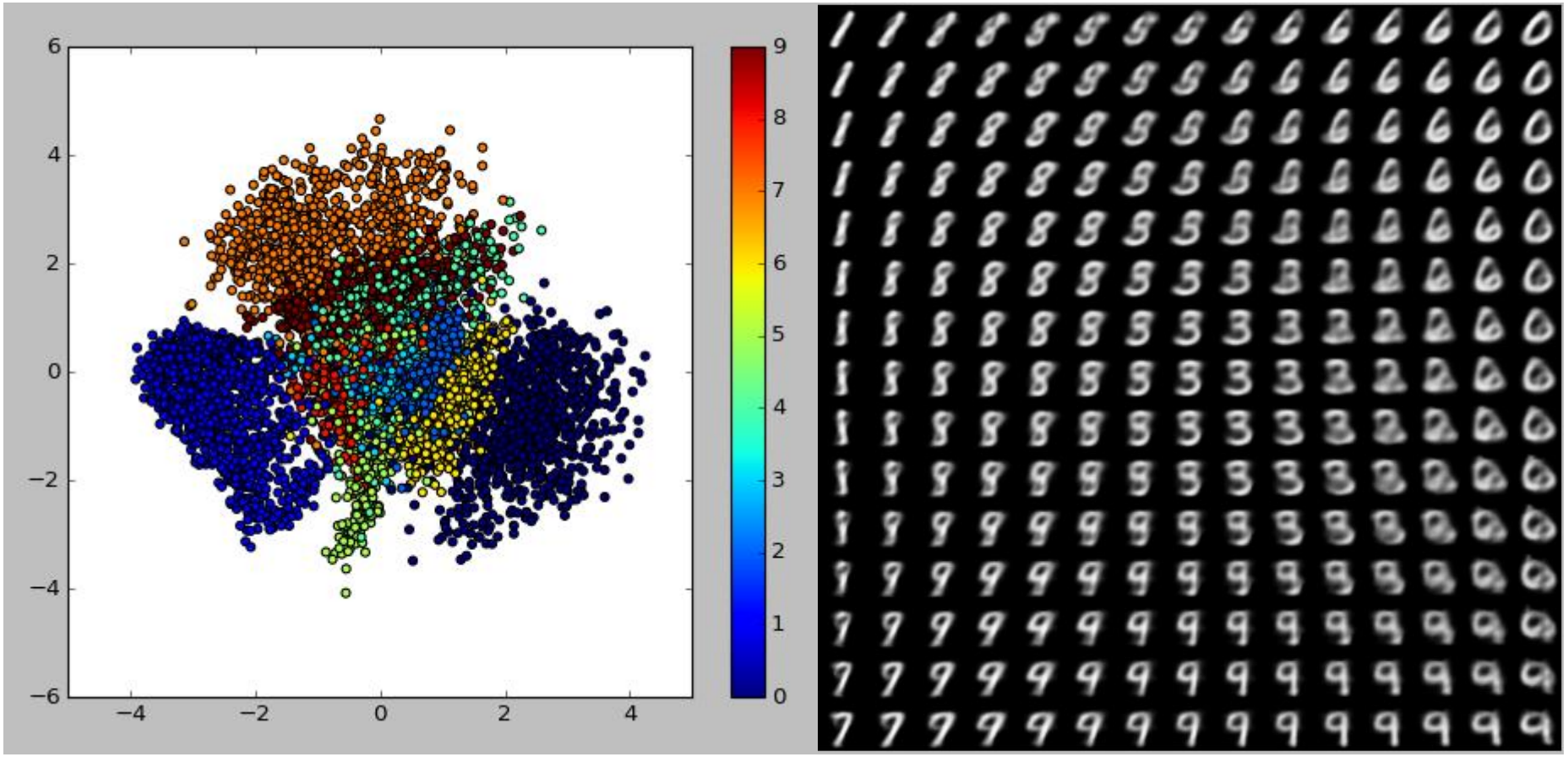
Költség függvény: Binary crossentropy +
+ KL - divergencia (Kullback-Leibler)
(eltérések közti határérték)

$$D_{KL} = \frac{1}{2} \cdot \sum \left(1 + \log(\sigma^2) - \mu^2 - \sigma^2\right)$$

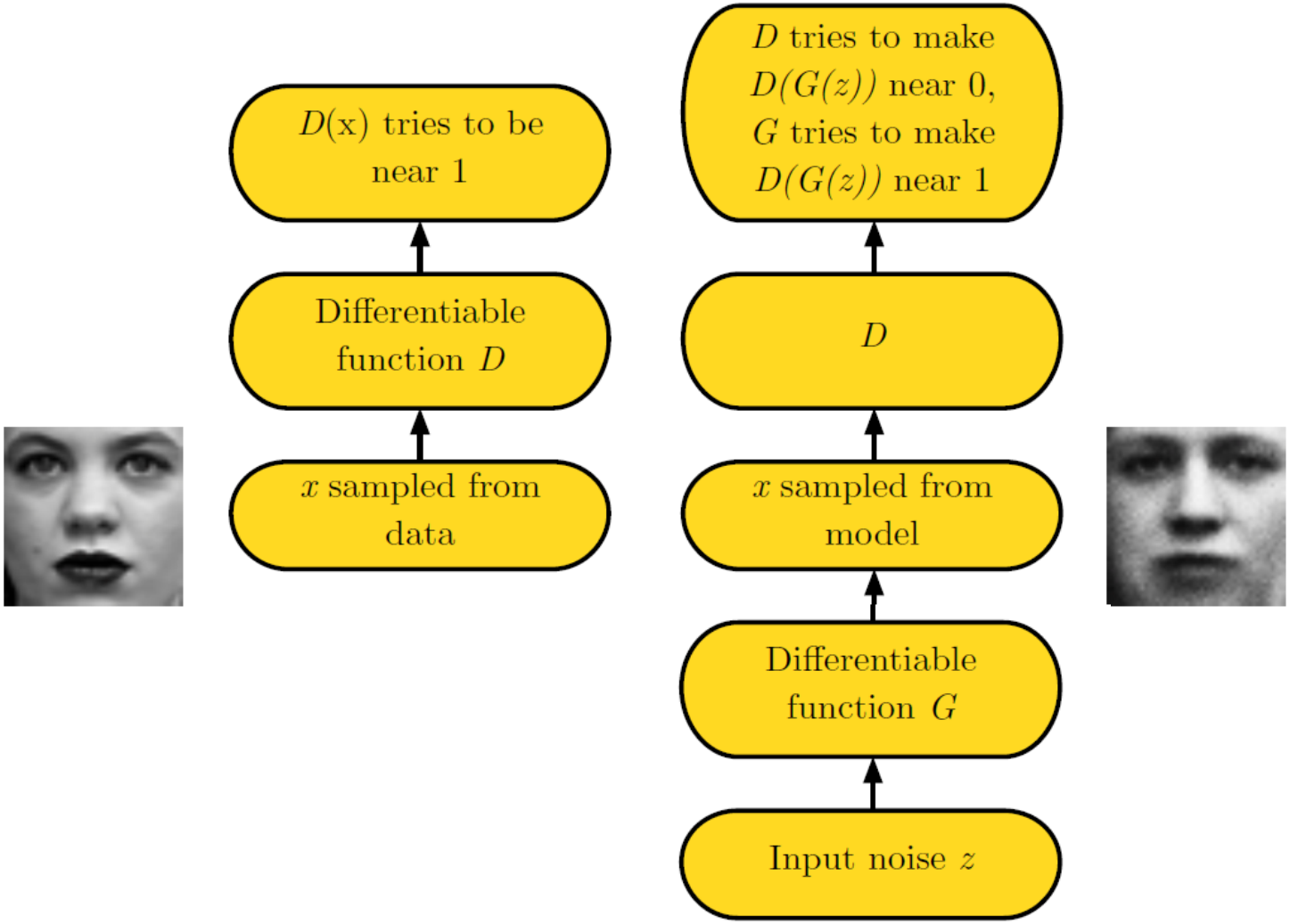
Adat generálás:

$z \sim N(0, I)$ "mintavétel"

Variational AE,
2D látens sík és digit generálás

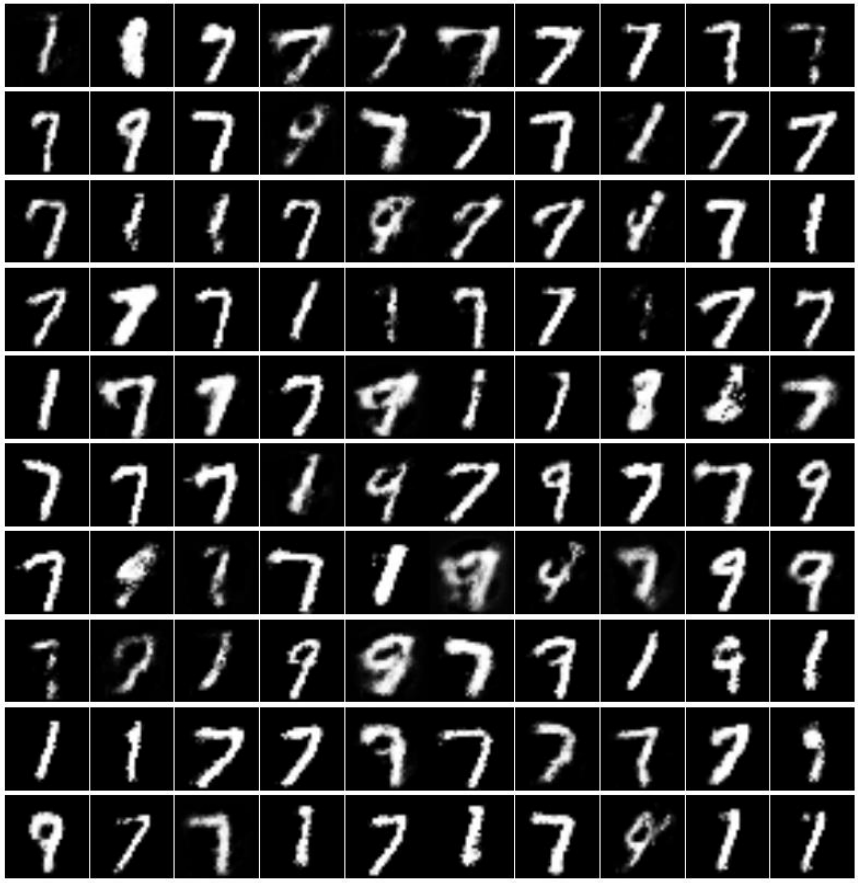


Generatieve Adversarial Network



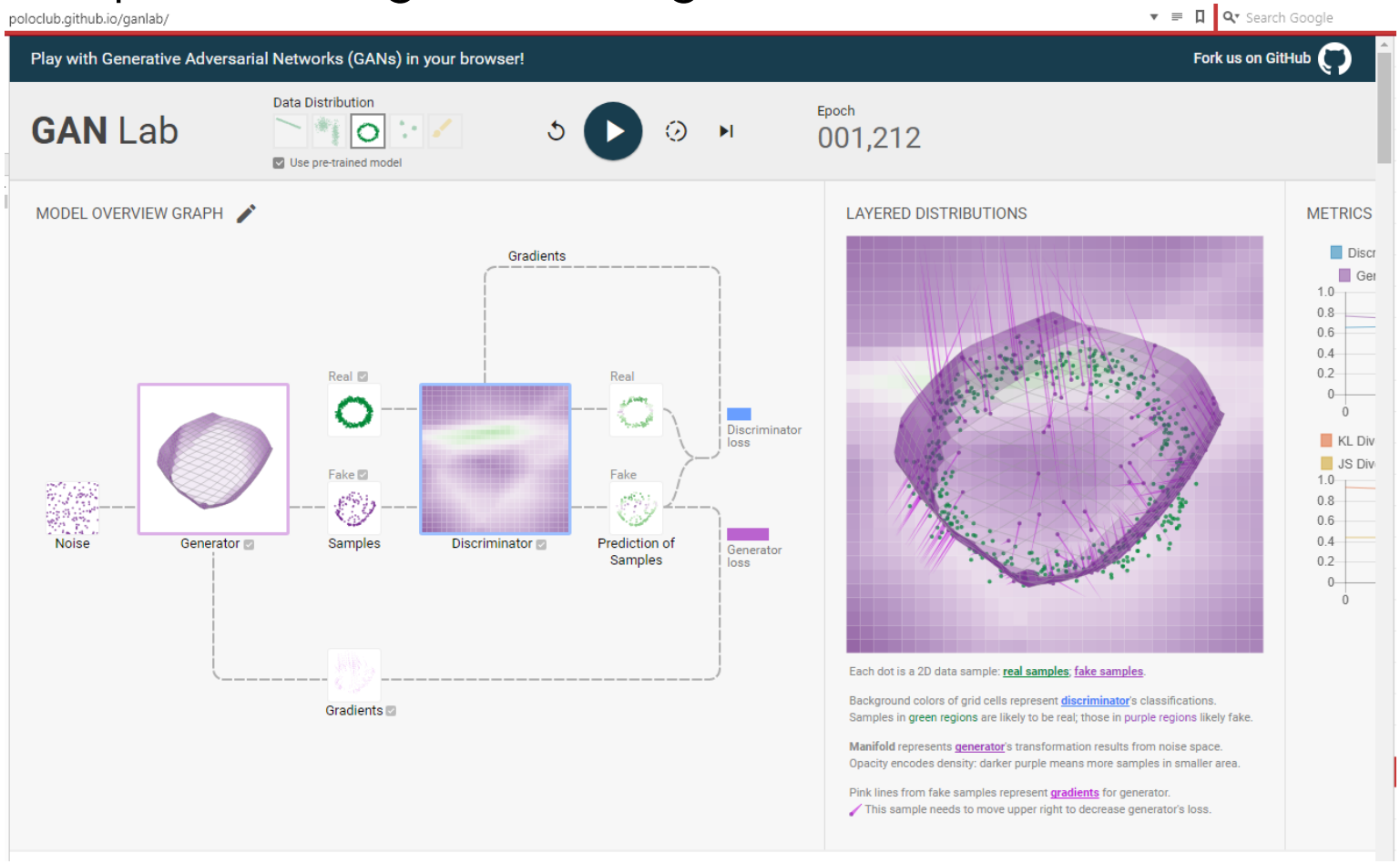
Forrás: Goodfellow (2016), https://arxiv.org/abs/1701.00160

GAN-mnist (Keras-GAN)



GAN Lab

- https://poloclub.github.io/ganlab/



Köszönöm a figyelmet!

csapot@tmit.bme.hu

SmartLab
Intelligent Interactions

http://smartlab.tmit.bme.hu

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