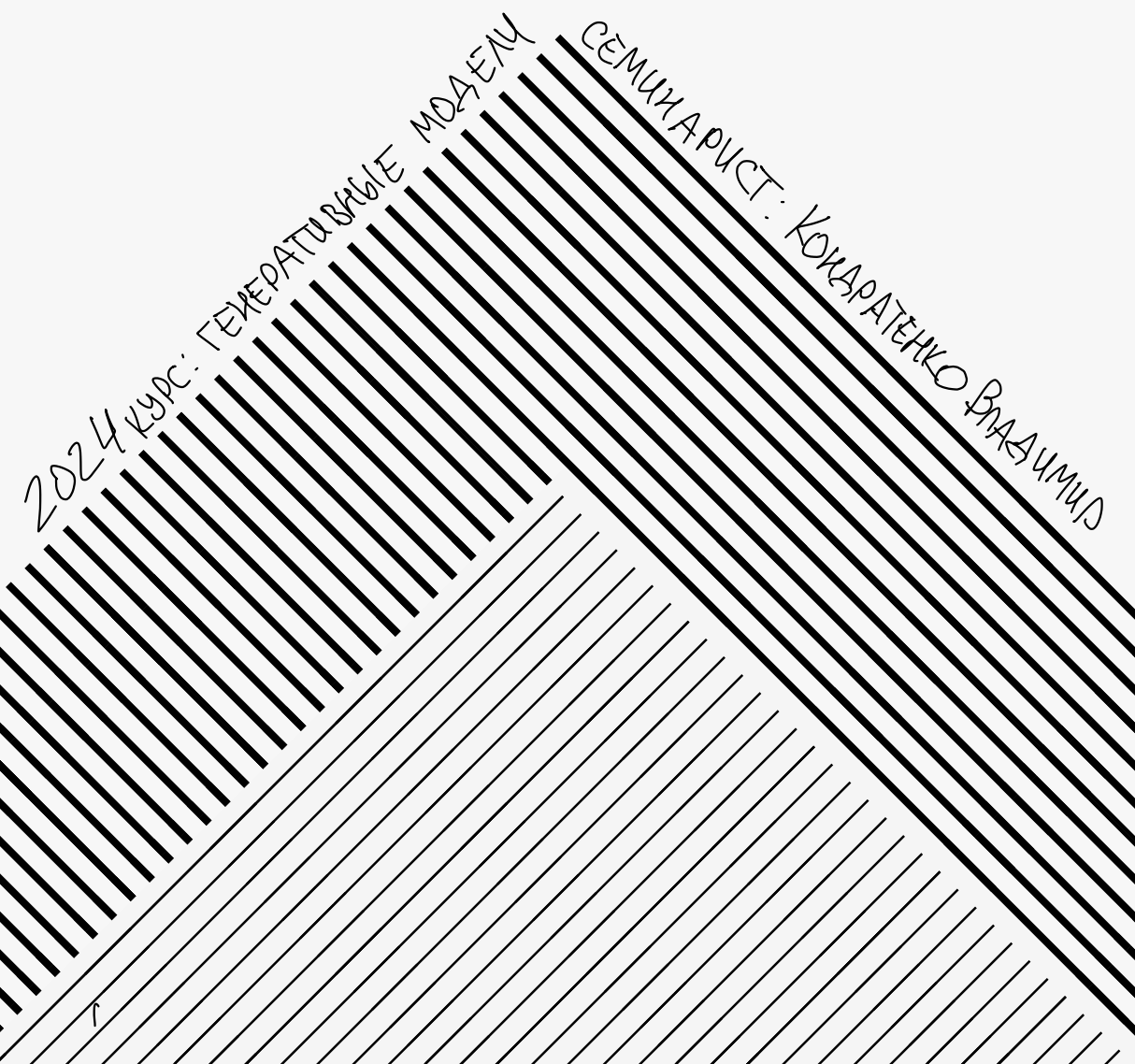


# Семинар 6



$$\min_G \max_D \mathbb{E}_x \log D(x) + \mathbb{E}_{p(z)} \log (1 - D(G(z)))$$

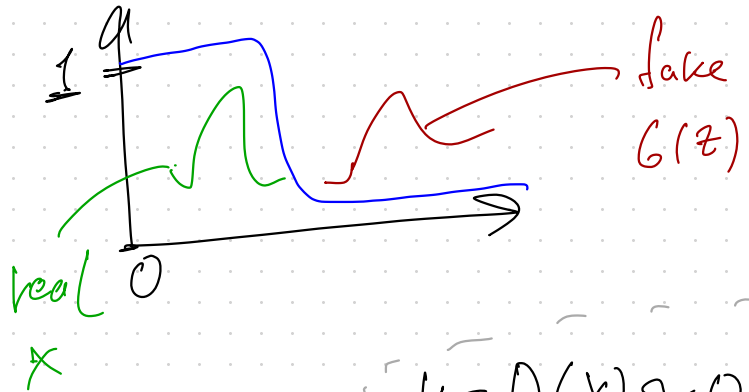
$$\begin{bmatrix} D(x), 1 \\ D(G(z)), 0 \end{bmatrix} \rightarrow \text{BCE loss (given } D)$$

$$\begin{bmatrix} D(G(z)), 1 \end{bmatrix} \rightarrow \text{BCE loss} \rightarrow \min \log (1 - D(G(z))) \sim \max \log D(G(z))$$

$$\min \log(1 - D(G(z))) \sim \max \log D(G(z))$$

$$1. D(x) \approx 1$$

$$D(G(z)) \approx 0$$



$$\frac{dD}{d\theta} \sim 0$$

$$\frac{d \log(1 - D(G(z)))}{d\theta} = \frac{-1}{1 - y} \frac{dD}{d\theta} \approx \ominus$$

1. замыкание градиентов

$$\frac{d \log D(G(z))}{d\theta} = \frac{1}{y} \frac{dD}{d\theta} \approx \ominus$$

1. не стандартное обречение

2. он хог он бакоба

