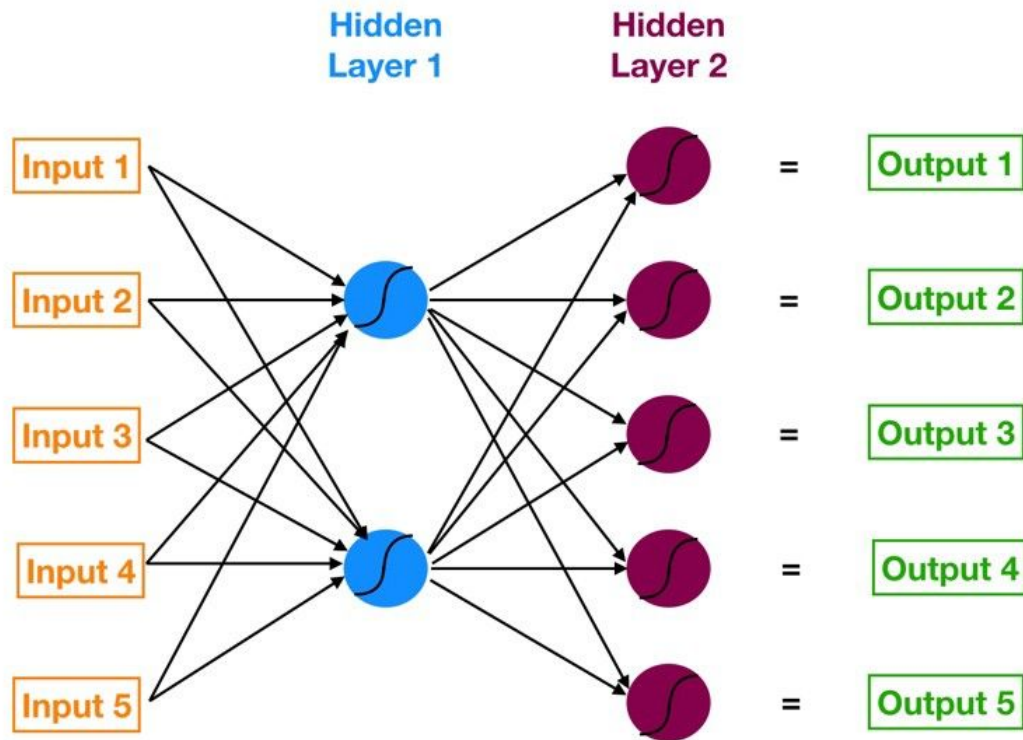


Využití neuronových sítí pro řešení těžkých problémů

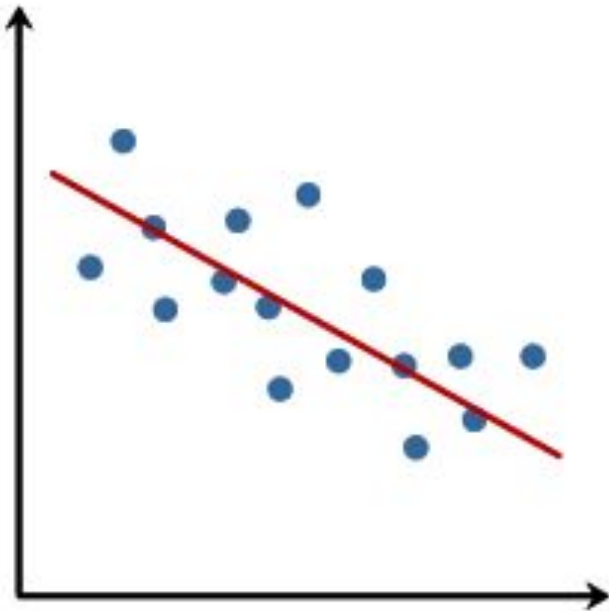
Michal Starý, Marek Kadlčík

Neuronové sítě

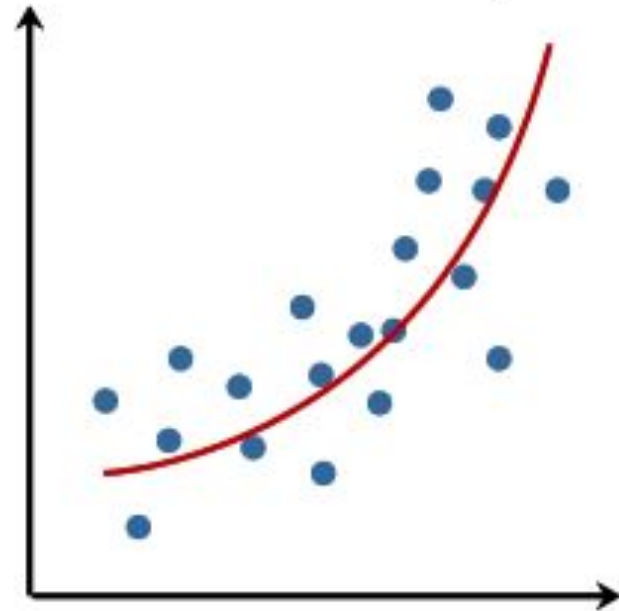


Regrese

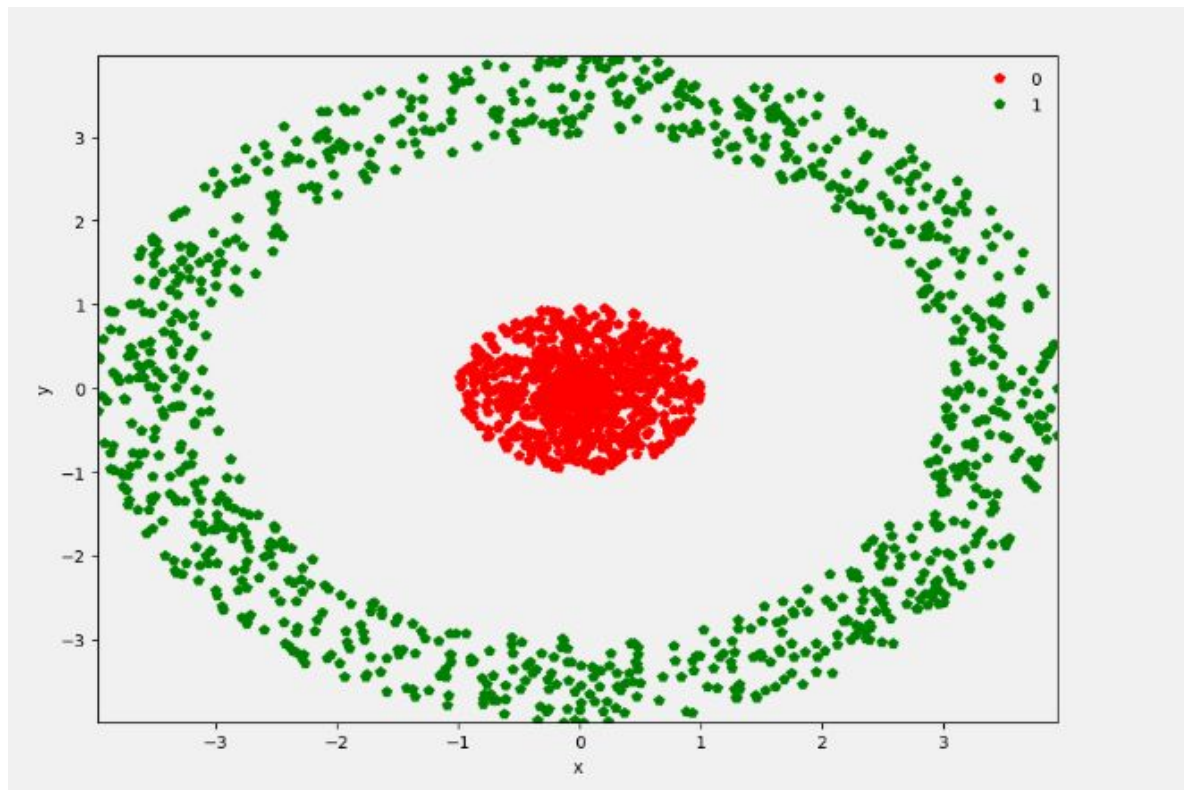
Linear



No linear relationship



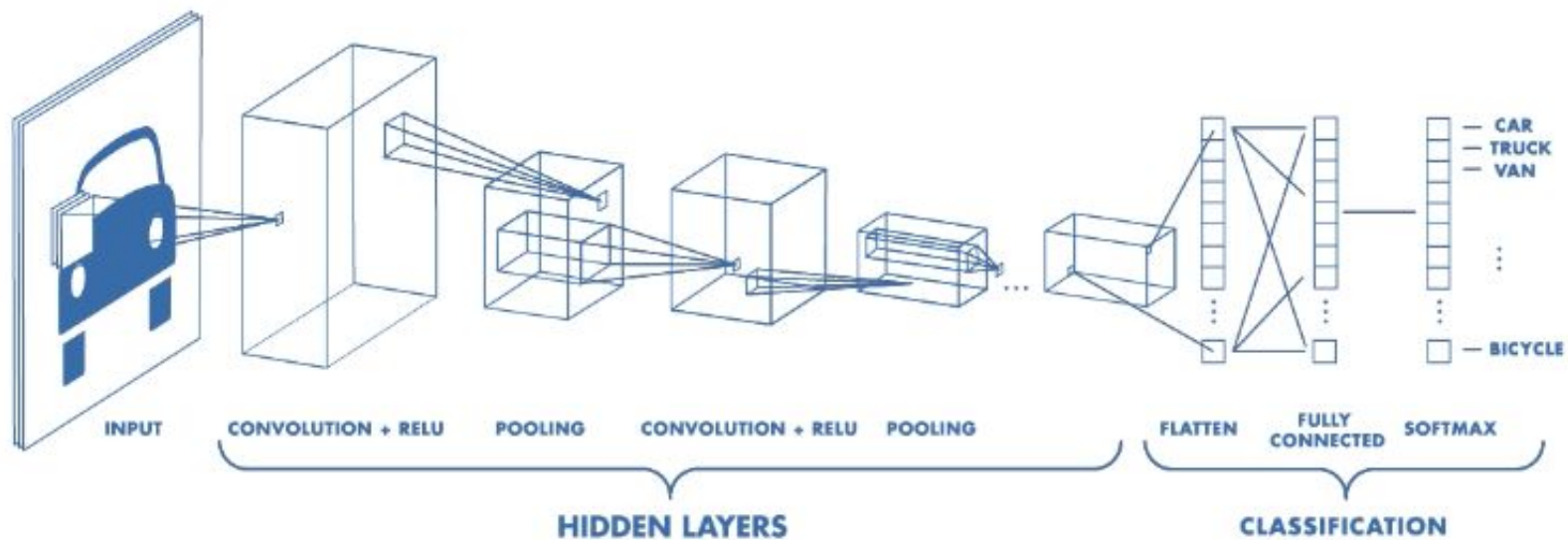
Klasifikace



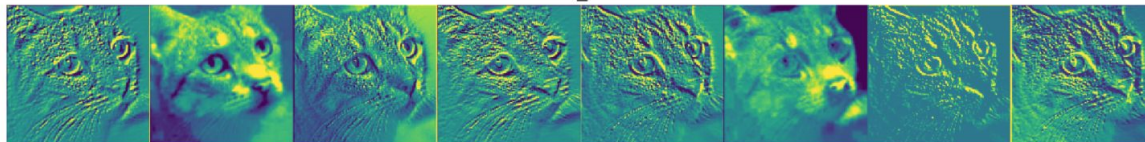
Generace

GPT-2

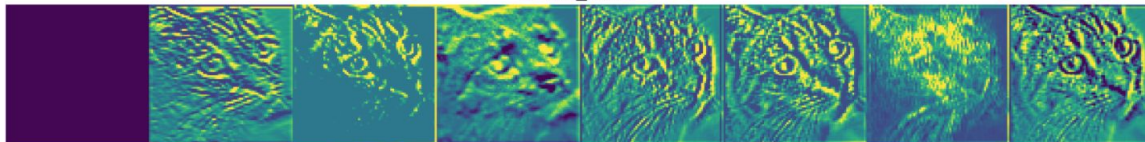
Konvoluční neuronové sítě (CNN)



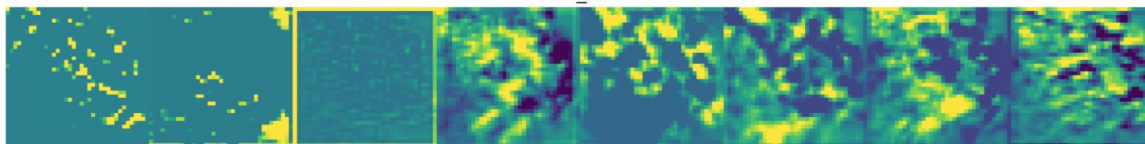
block1_conv1



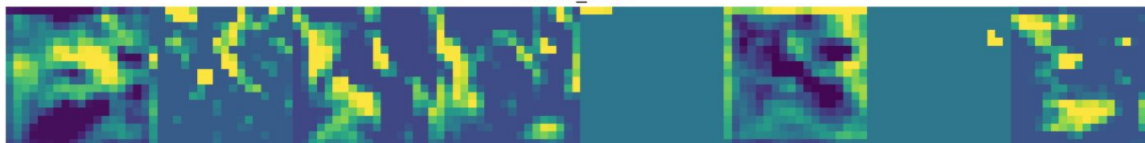
block2_conv1



block3_conv1



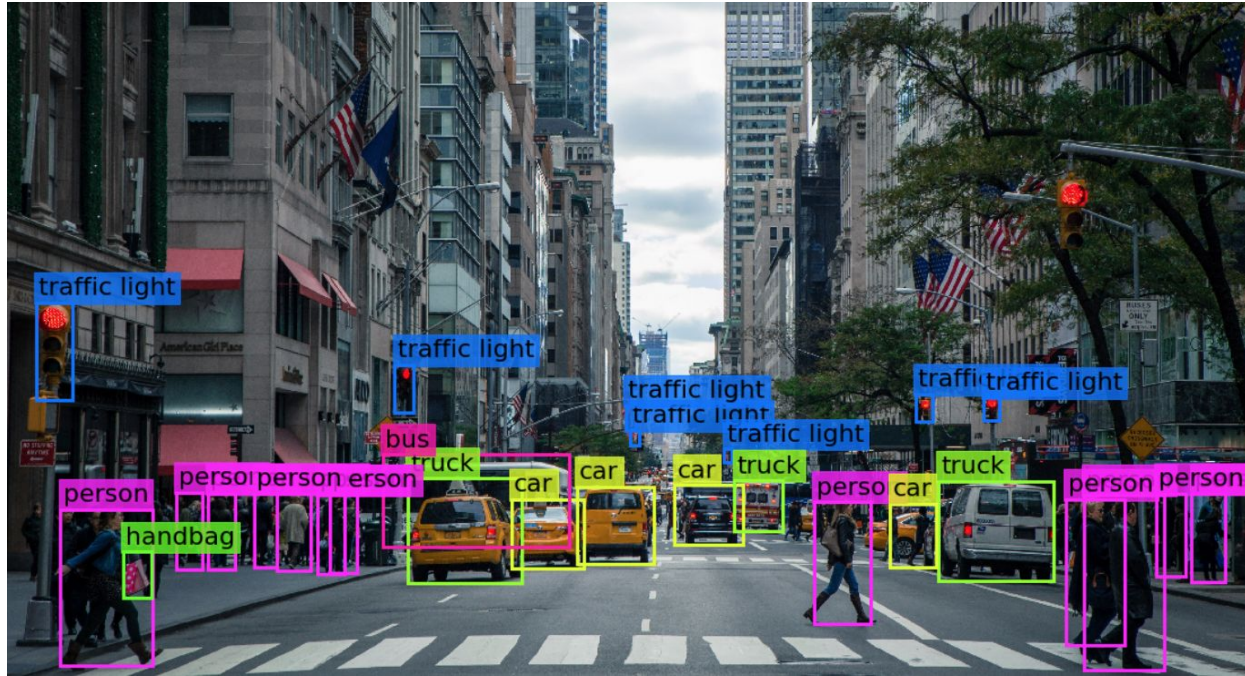
block4_conv1



block5_conv1



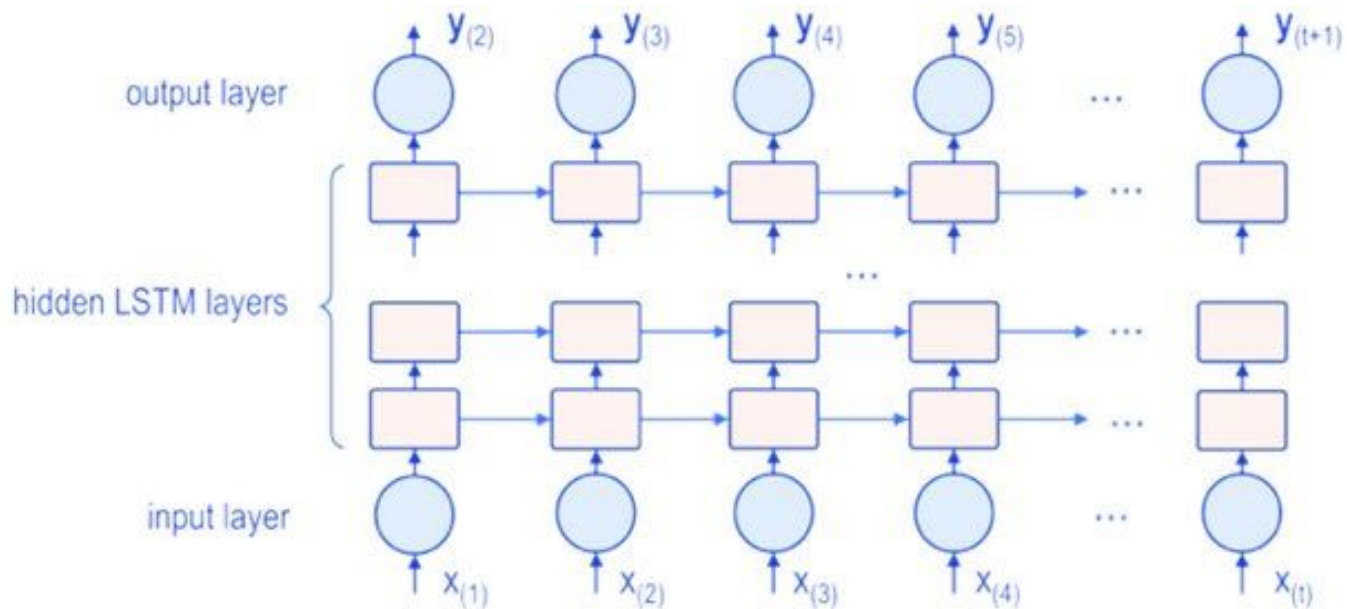
Detekce objektů z obrázků



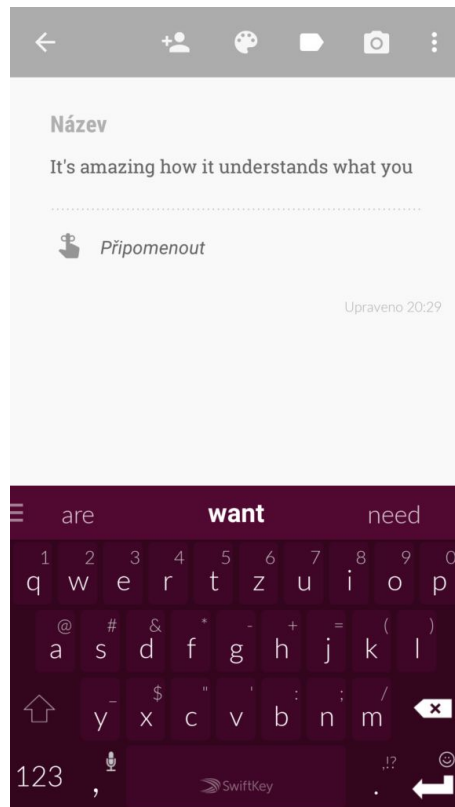
Detekce objektů z obrázků ukázka

Security system on steroids

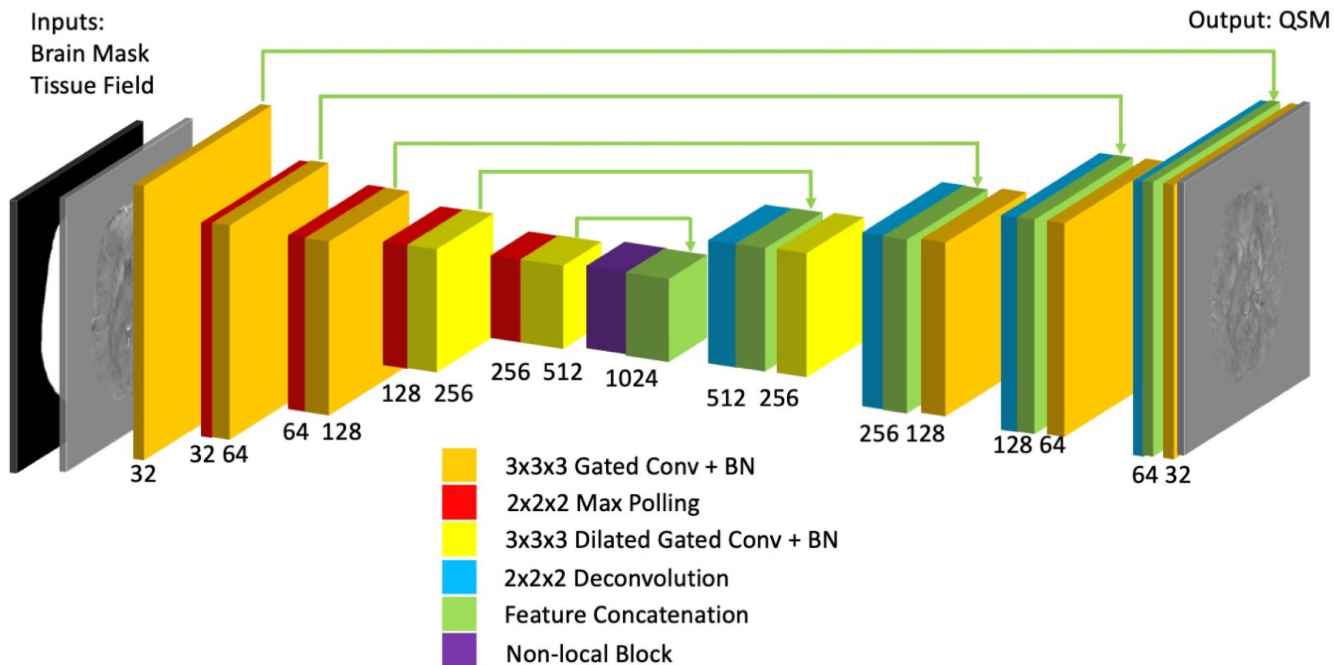
Long Short Term Memory síť (LSTM)



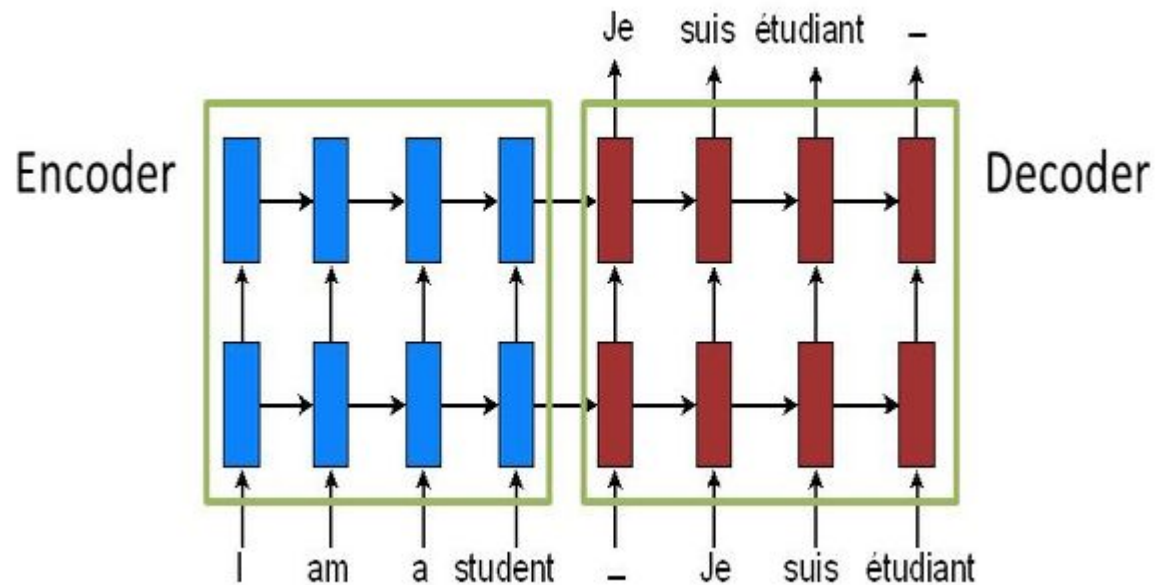
Prediktivní klávesnice



Encoder/Decoder modely



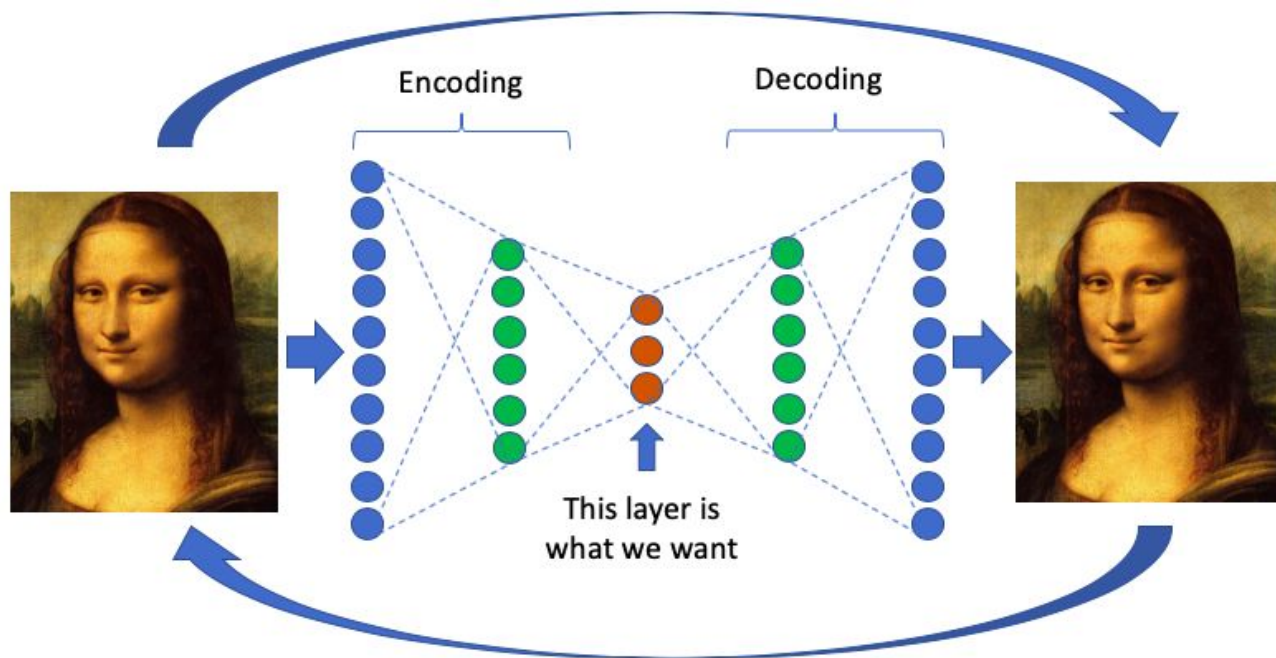
Strojový překlad



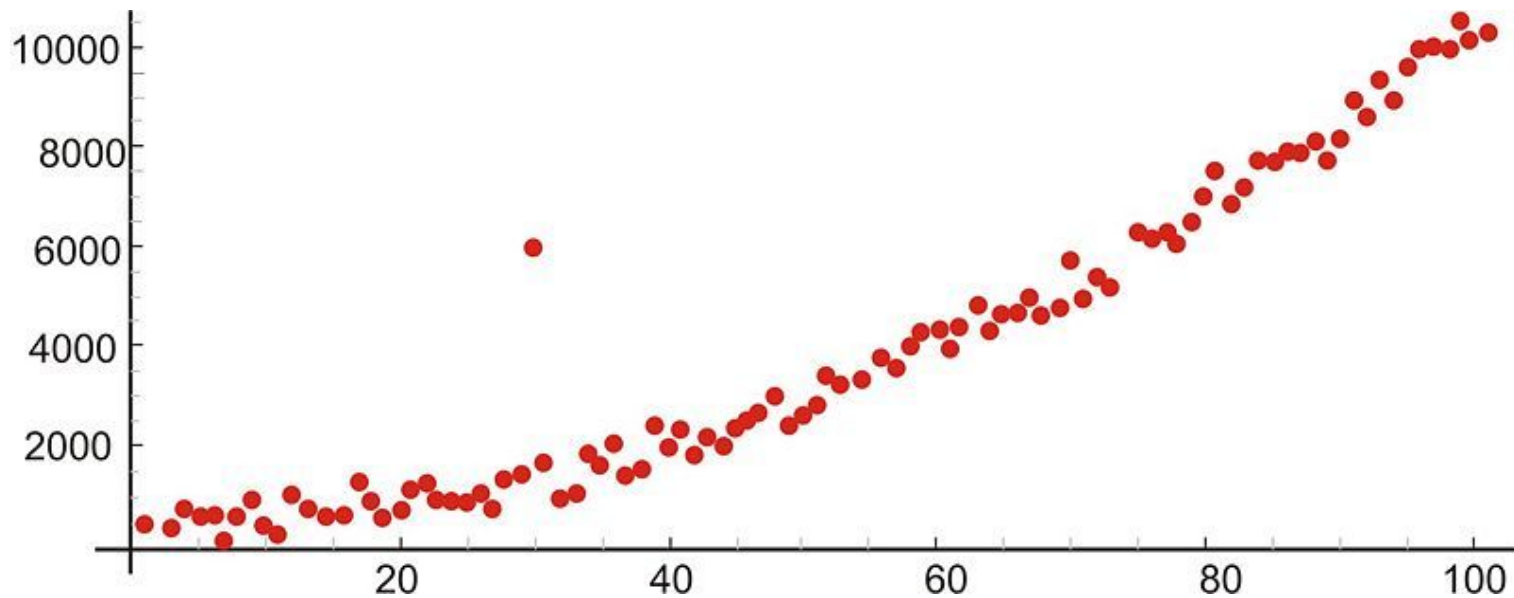
Strojový překlad

Translate

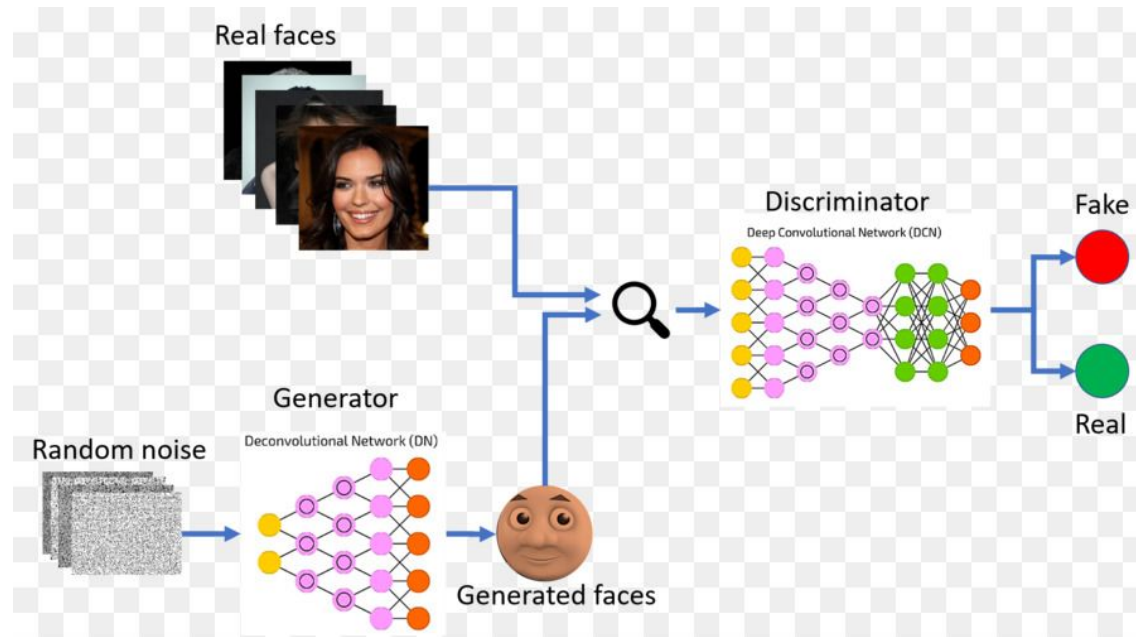
Autoencoders



Detekce outlierů



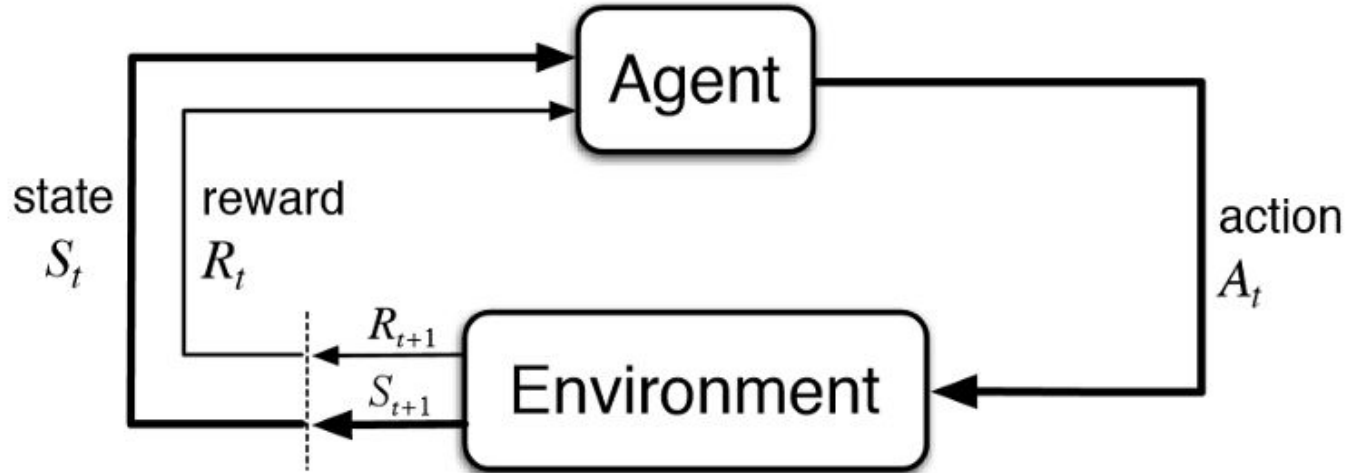
Generative Adversarial Networks (GAN)



Deepfakes



Neuronové sítě v reinforcement learning



AlphaStar

A screenshot from a StarCraft II match. The top left corner shows a 'PRODUCTION' window with a P2 icon. The top right corner features the 'DeepMind STAR CRAFT DEMONSTRATION' logo. The bottom left corner displays a '7:01 REPLAY' timer and a 'Catalyst LE' icon. The bottom right corner has the 'BILZARD ENTERTAINMENT' logo. The main game area shows a complex Zerg base with numerous units and structures. A player name 'AlphaStar' is visible near a unit. The bottom status bar shows the following data:

Player	Score	Supply	Minerals	Gas	Workers	Army	Weapons & Armor
AlphaStar	2	85 / 102	275 +1287	130 +527	39	46	
LiquidMaNa	0	76 / 84	390 +1579	124 +713	38	38	

Q&A

Zdroje

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