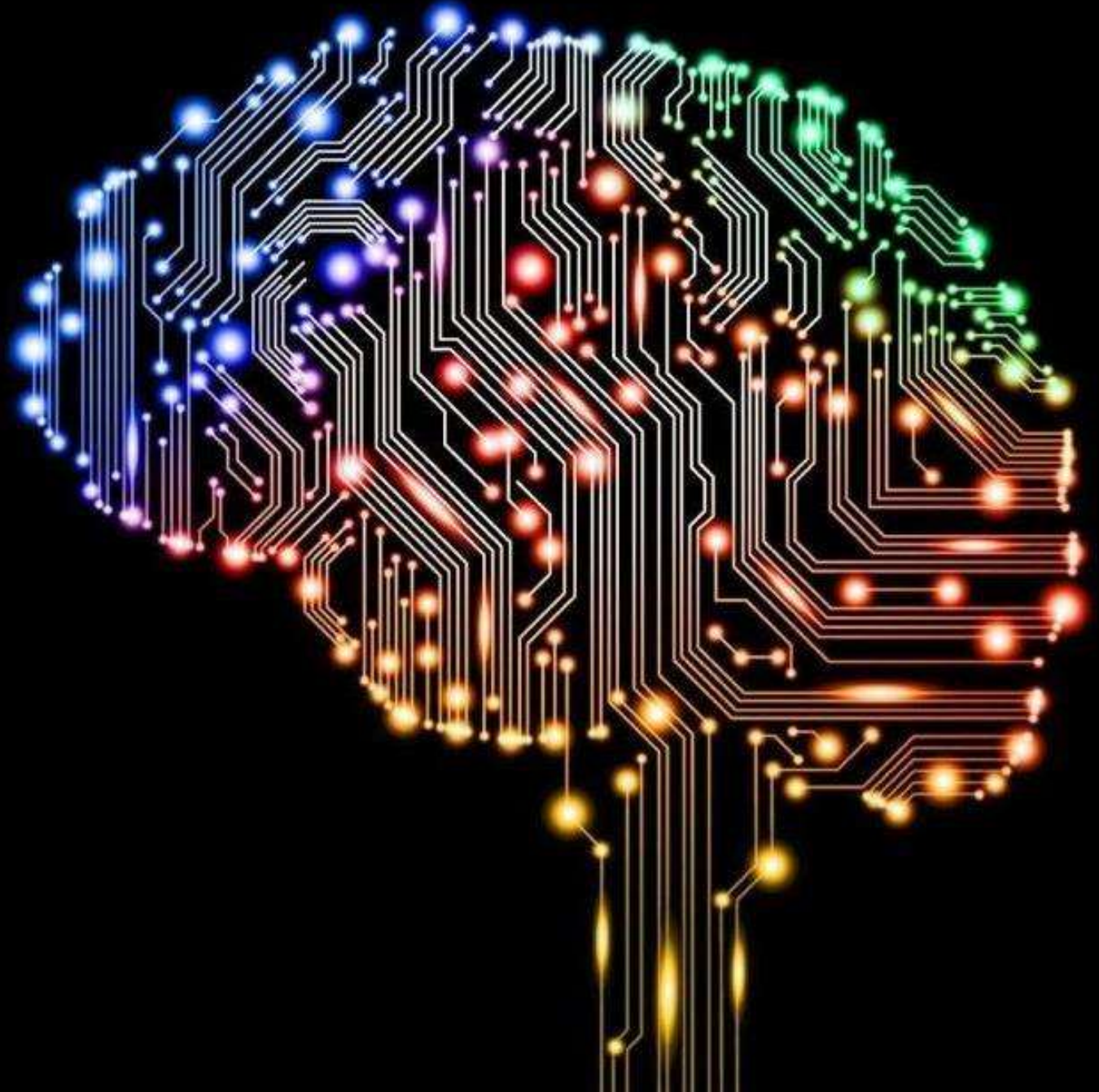# AI @ MSFT

Michal Marusan
Data & AI

Microsoft

Our strategy is to build best-in-class **platforms** and productivity services for an **intelligent cloud** and an **intelligent edge** infused with **artificial intelligence** ("AI").

Our values and principles

Enable people

Inclusive design

Build trust in technology

Why now?

$40B estimated additional revenue/shifting revenue driven by AI in three years

85% Enterprises using AI by 2020

AI advancements

Pervasive data

Cloud compute

PC

Web

AI

Microsoft AI advancements

96%
RESNET vision test
152 layers

5.1%
Switchboard speech
recognition test

88.493%
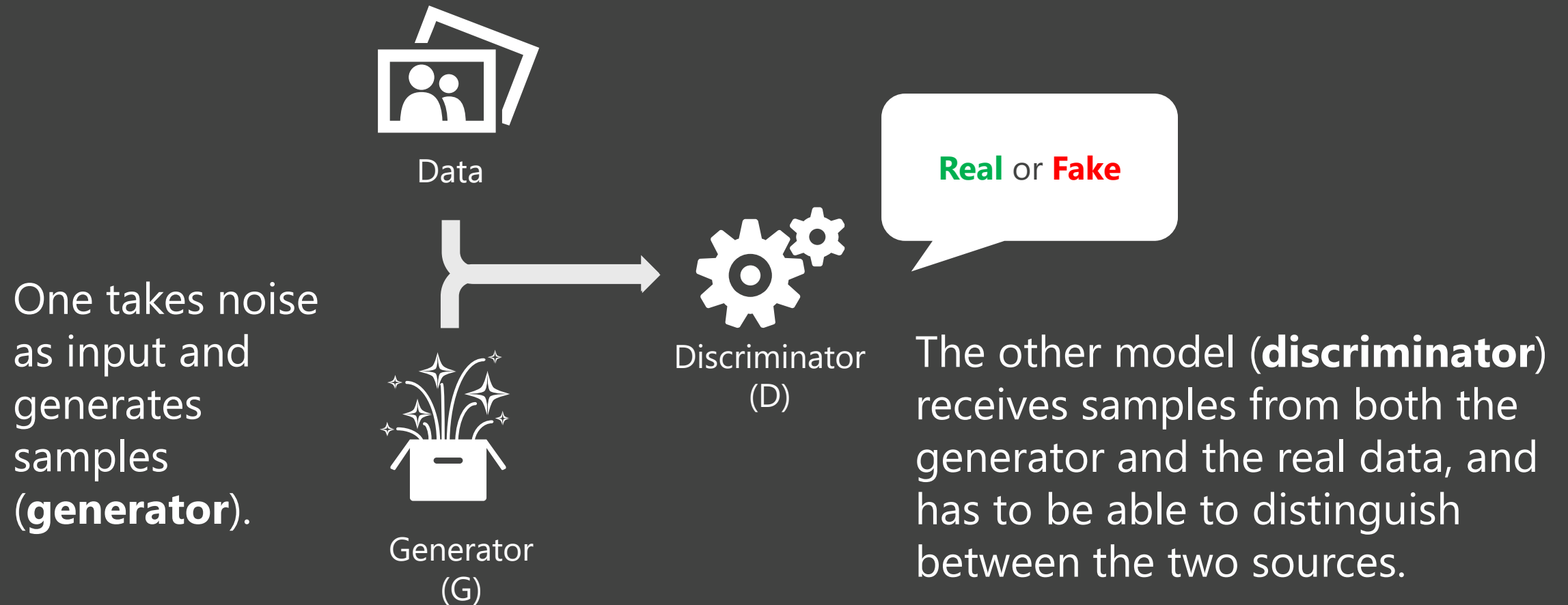SQuAD reading
comprehension test

69.9%
MT
research system

Object recognition
Human parity
2016

Speech recognition
Human parity
2017

Machine reading
comprehension
Human parity
Jan 2018

Machine translation
Human parity
March 2018

AI

Machine Learning

Deep Learning

Generative Adversarial Networks (GAN)

...main idea is to have two competing neural network models...

Data

Discriminator (D)

Generator (G)

Real or Fake

One takes noise as input and generates samples (**generator**).

The other model (**discriminator**) receives samples from both the generator and the real data, and has to be able to distinguish between the two sources.

Learning from the masters

Building fans

https://www.nextrembrandt.com/

PORTRAIT

CAUCASIAN

MALE

FACIAL HAIR

30-40 YEARS OLD
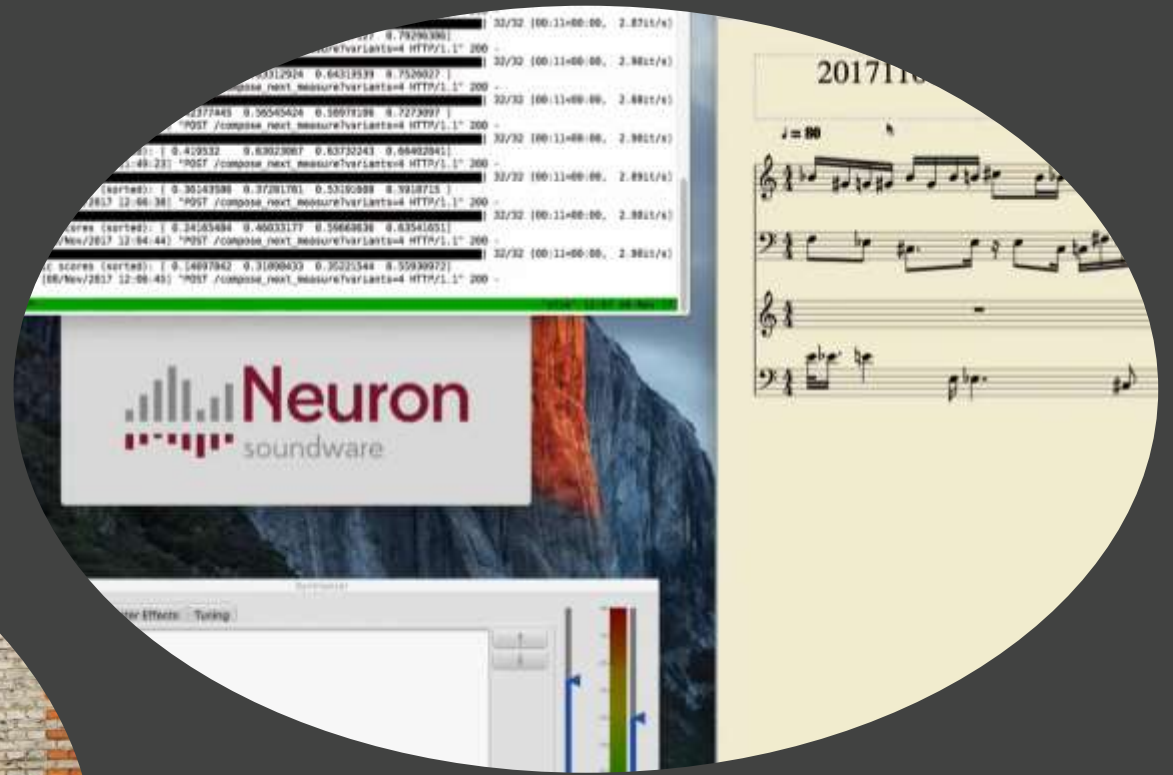
DARK CLOTHING

COLLAR

WEARING A HAT

FACING TO THE RIGHT

346 paintings
150GB data
500h render
148M pixels

Vincent van Gogh, 1889

Vincent van Gogh, 1889

Microsoft