ACM AI + ACM TeachLA

Session #1: What is AI?

Slides Link: https://tinyurl.com/aimlsesh1
Attendance Link: https://tinyurl.com/aimlhello

ACM AI

Artificial Intelligence

Maybe You've Heard Of It...

Digital Agriculture: Farmers in India are using AI

Get ready, this year your next ...... be with an A.I.

AI2: MIT Researchers Create Artificial Intelligence System To Stop Cyberattacks

onomy. But How

Facebook's DeepText AI Can Understand What You Write

it Formula Might

Video games created using AI

You Get a Loan

A.I. and Big Data Could Power a New War on Poverty

AI Earthquake Tracker Is Inspired by Speech Recognition Technology

al Intelligence Learns And Recreates ex, Nobel-Winning Physics Experiment

How an A.I. Cat-and-Mouse Game Generates Believable Fake Photos

Instagr... detect bullying in photos

Hold Up

Some Quotes

The new spring in AI is the most significant development in computing in my lifetime. Every month, there are stunning new applications and transformative new techniques.
- Sergey Brin, Google Co-Founder

It's likely that machines will be smarter than us before the end of the century—not just at chess or trivia questions but at just about everything, from mathematics and engineering to science and medicine.
- Gary Marcus, Professor at NYU

It's hard to overstate how big of an impact it's going to have on society over the next 20 years.
- Jeff Bezos, CEO of Amazon

But Wait

Humanity's days are NUMBERED and AI will cause mass extinction, warns Stephen Hawking

A.I. has a bias problem that needs to be fixed: World Economic Forum

Rise of the racist robots – how AI is learning all our worst impulses

Elon Musk Warns Governors: Artificial Intelligence Poses 'Existential Risk'

Why scan-reading artificial intelligence is bad news for radiologists

Most Americans See Artificial Intelligence as a Threat to Jobs (Just Not Theirs)

Some Quotes

"I am in the camp that is concerned about artificial intelligence."
- Bill Gates, Founder of Microsoft

I think we should be very careful about artificial intelligence. If I had to guess at what our biggest existential threat is, it's probably that."
- Elon Musk, CEO of Tesla

"What all of us have to do is to make sure we are using AI in a way that is for the benefit of humanity, not to the detriment of humanity."
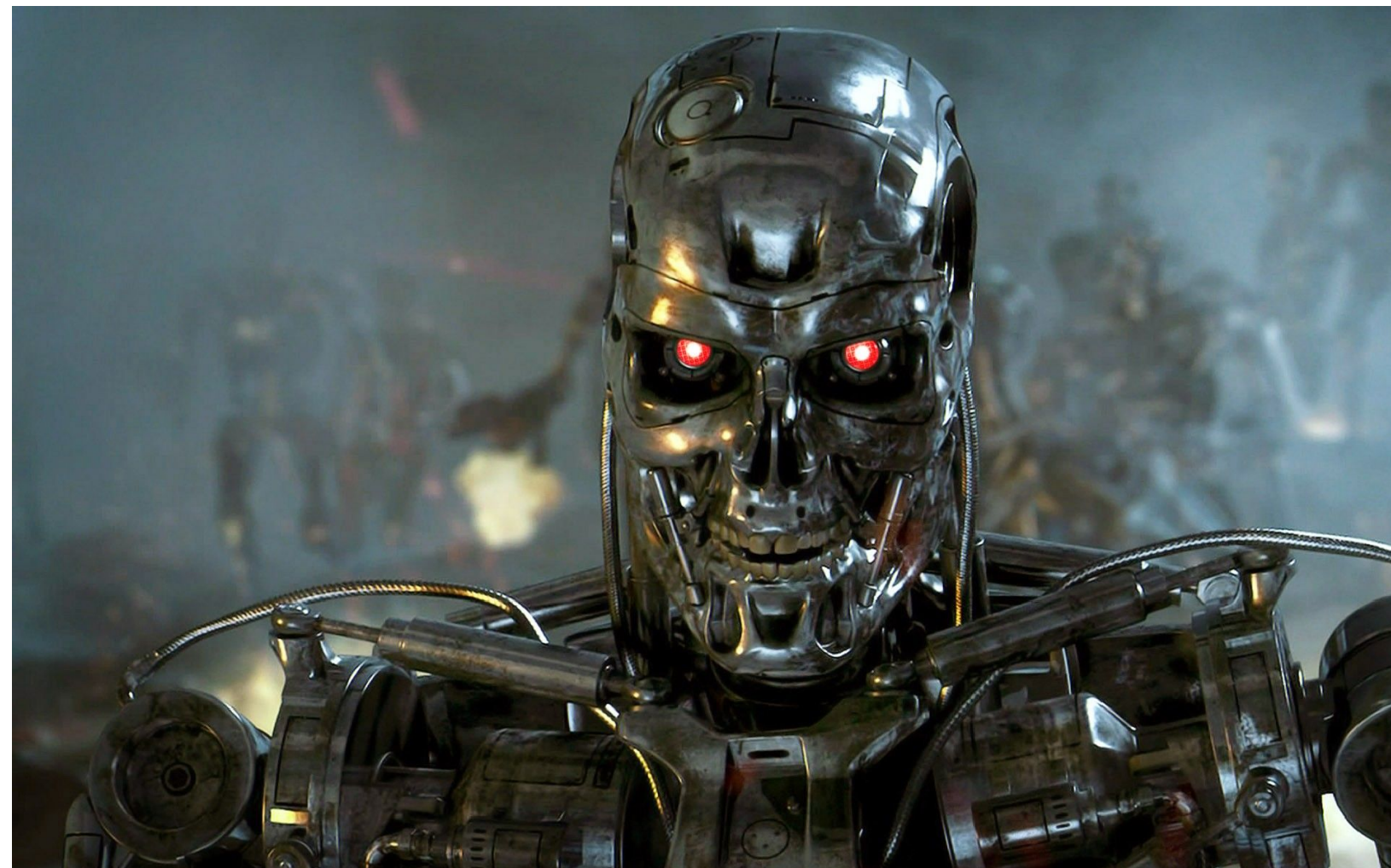- Tim Cook, CEO of Apple

Perception of AI in Media

Westworld

The Terminator

I, Robot

Ex Machina

What Do You Think?

Introduce yourself to the person(s) next to you

- Name, class, and favorite Disney princess

What is the first thing you think of when you hear the term "artificial intelligence"?
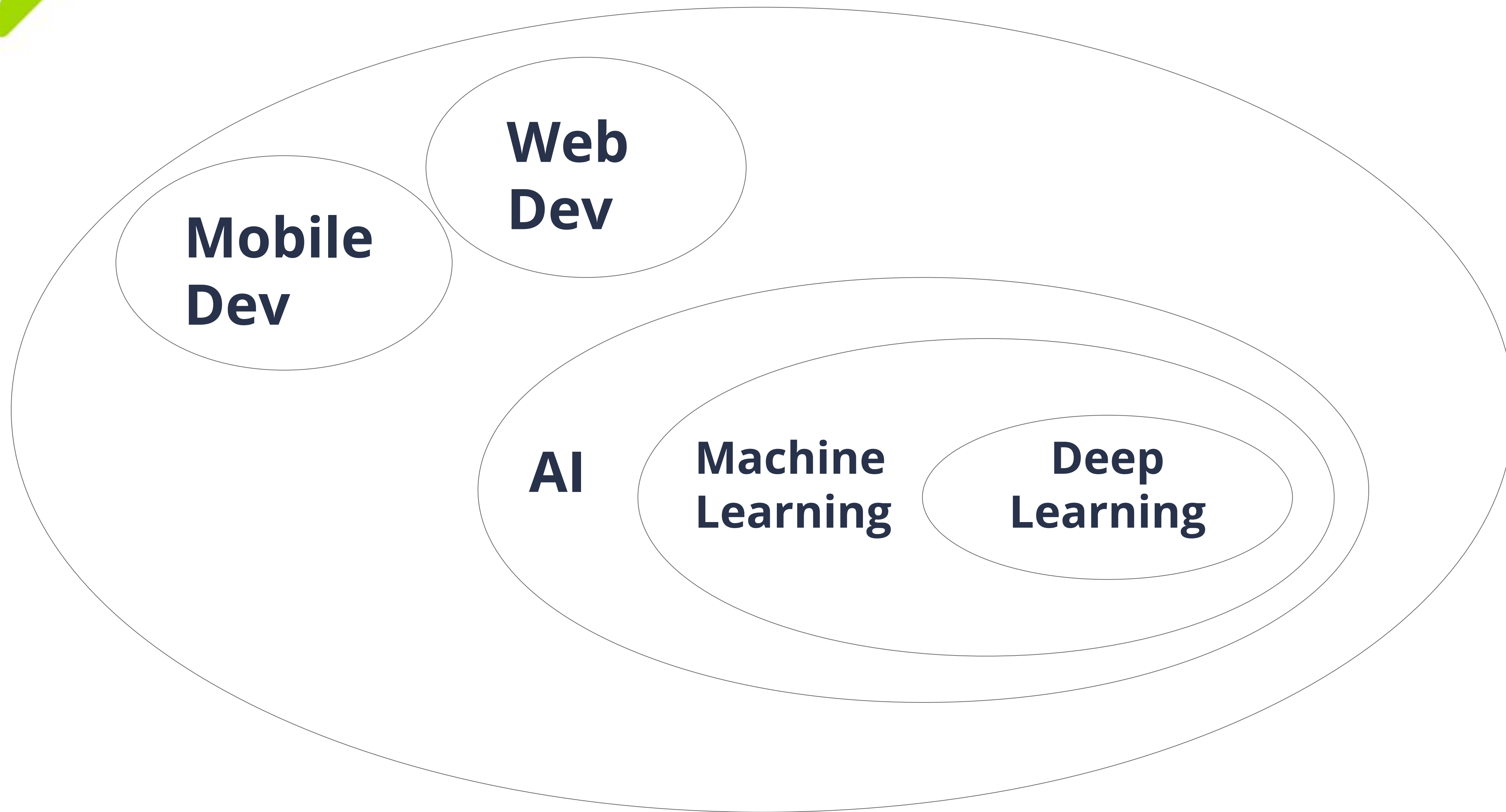
Could you define it?

So What Does AI Really Mean?

- **Artificial Intelligence** - The theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, decision-making, and translation between languages.

- **Machine Learning** - A type of AI that provides computers with the ability to learn without being explicitly programmed.
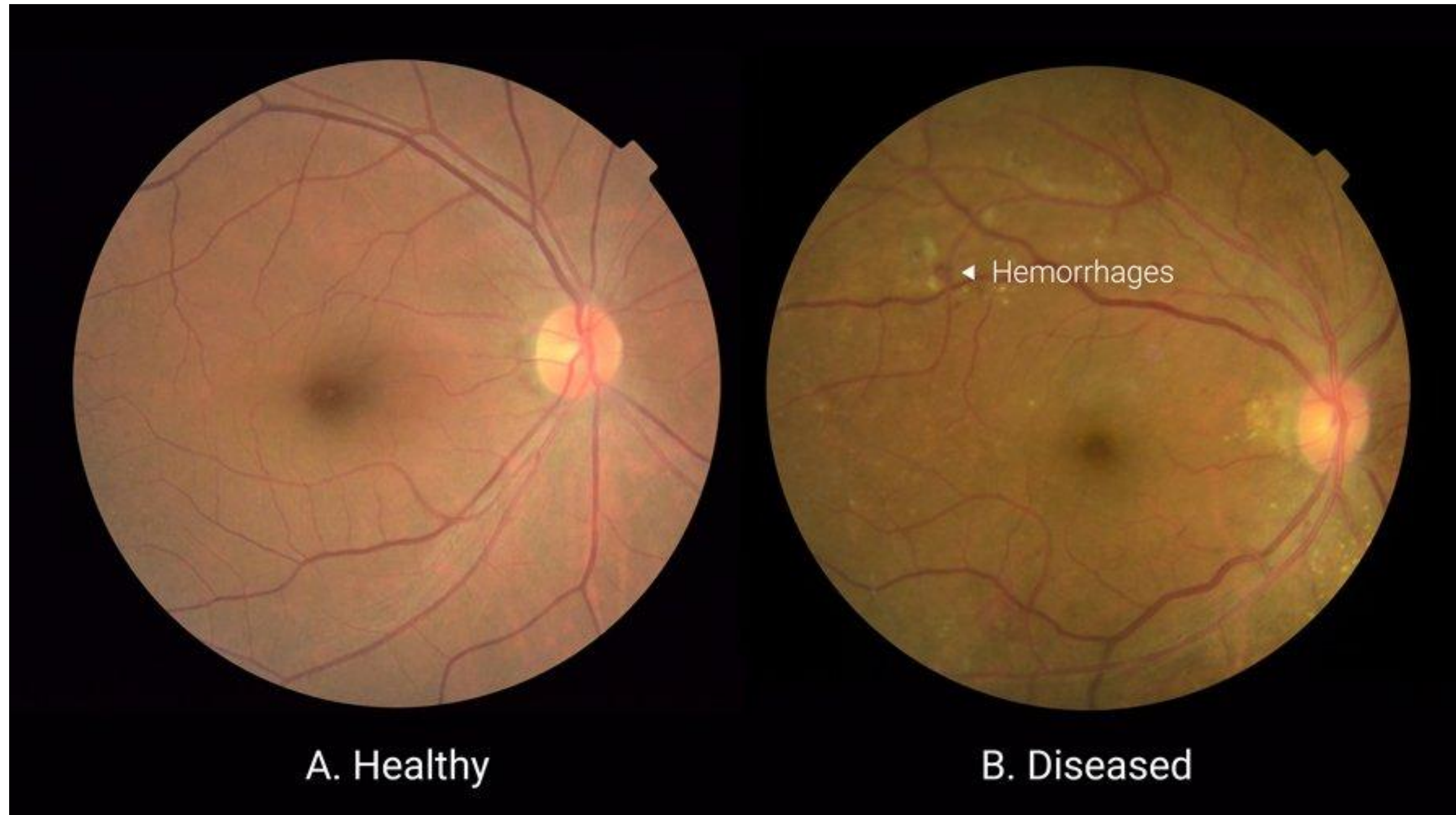
Computer Science Roadmap

Mobile Dev

Web Dev

AI

Machine Learning

Deep Learning

AI Use Cases

Computer Vision

Convolutional neural networks attain the **best** performance on computer vision tasks.

Healthcare

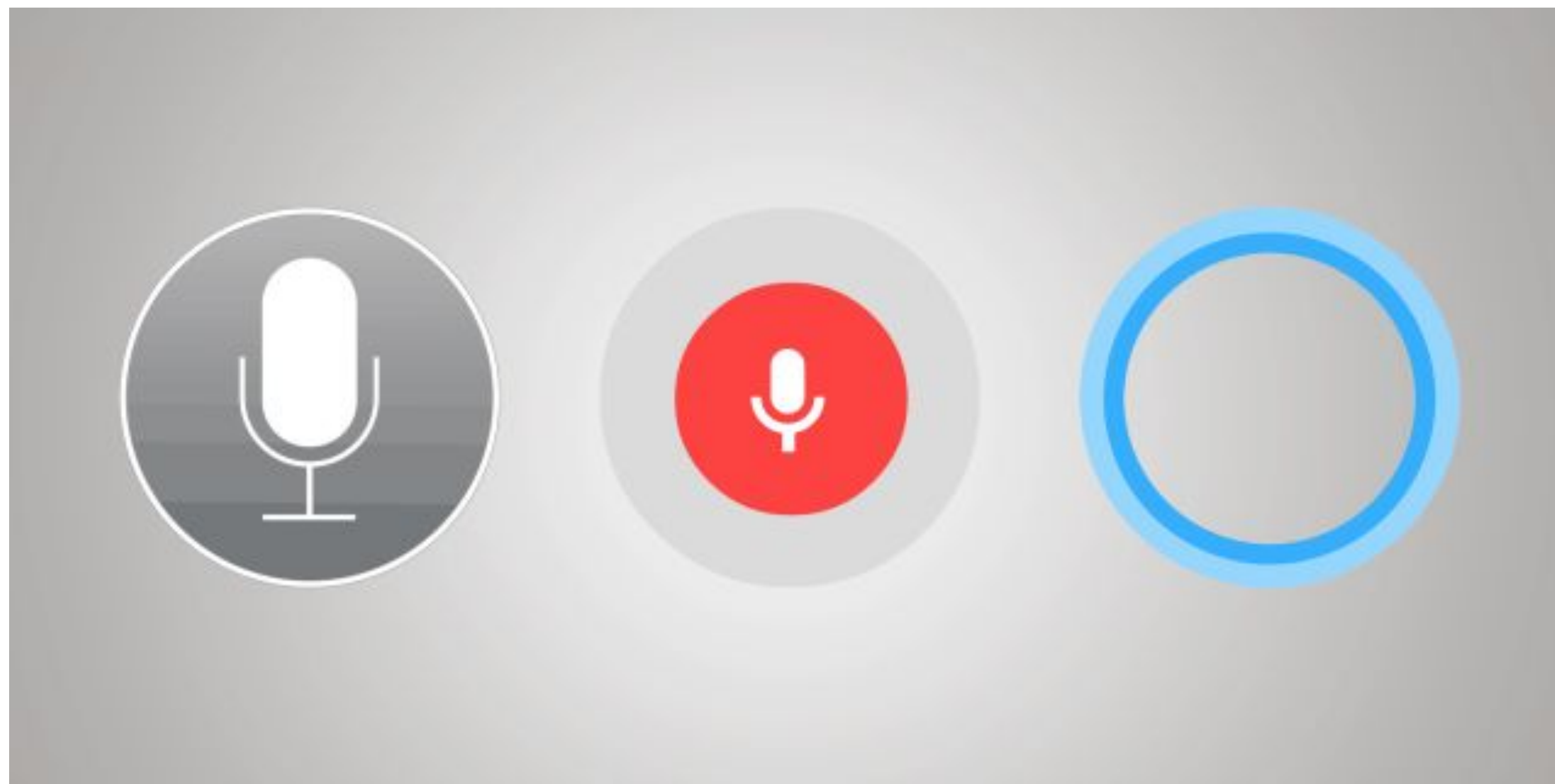A. Healthy   ◄ Hemorrhages   B. Diseased

Deep Learning techniques **outperform** trained specialists in some medical recognition tasks.
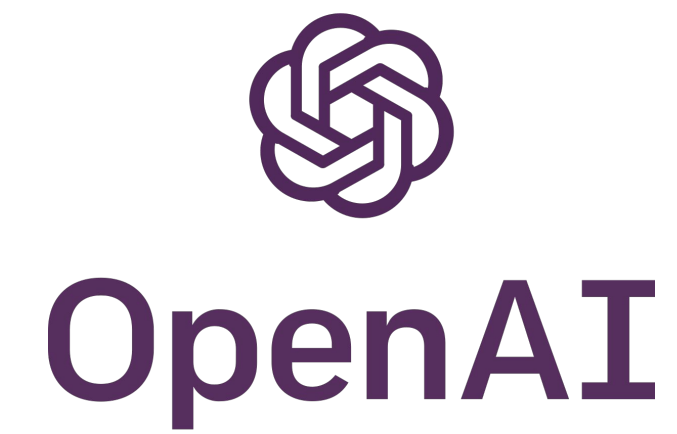
Natural Language Processing

Companies like Google, Amazon, Apple, and Microsoft all use some variations of neural networks for their question answering agents.

Games

Reinforcement learning attains the **best** performance on complex games like Dota 2 and Go.

AI/ML Course Goals

Vision

A course taught by UCLA students to introduce high-school students to artificial intelligence and its many applications.

Description

Artificial intelligence (AI) and machine learning (ML) have become extremely prevalent in society. Regardless of what areas high schoolers plan to pursue upon graduation, they're likely to encounter AI and ML-related technologies in their future careers

Structure

Course will be led by 2-4 UCLA students. Students will require access to a computer during the workshop.

Guidelines

We want students who are interested in STEM and/or are curious about computer science. It's recommended that students have prior knowledge of pre-calculus. Any students who are interested are welcome to participate, however.

Demos!

Project Magenta

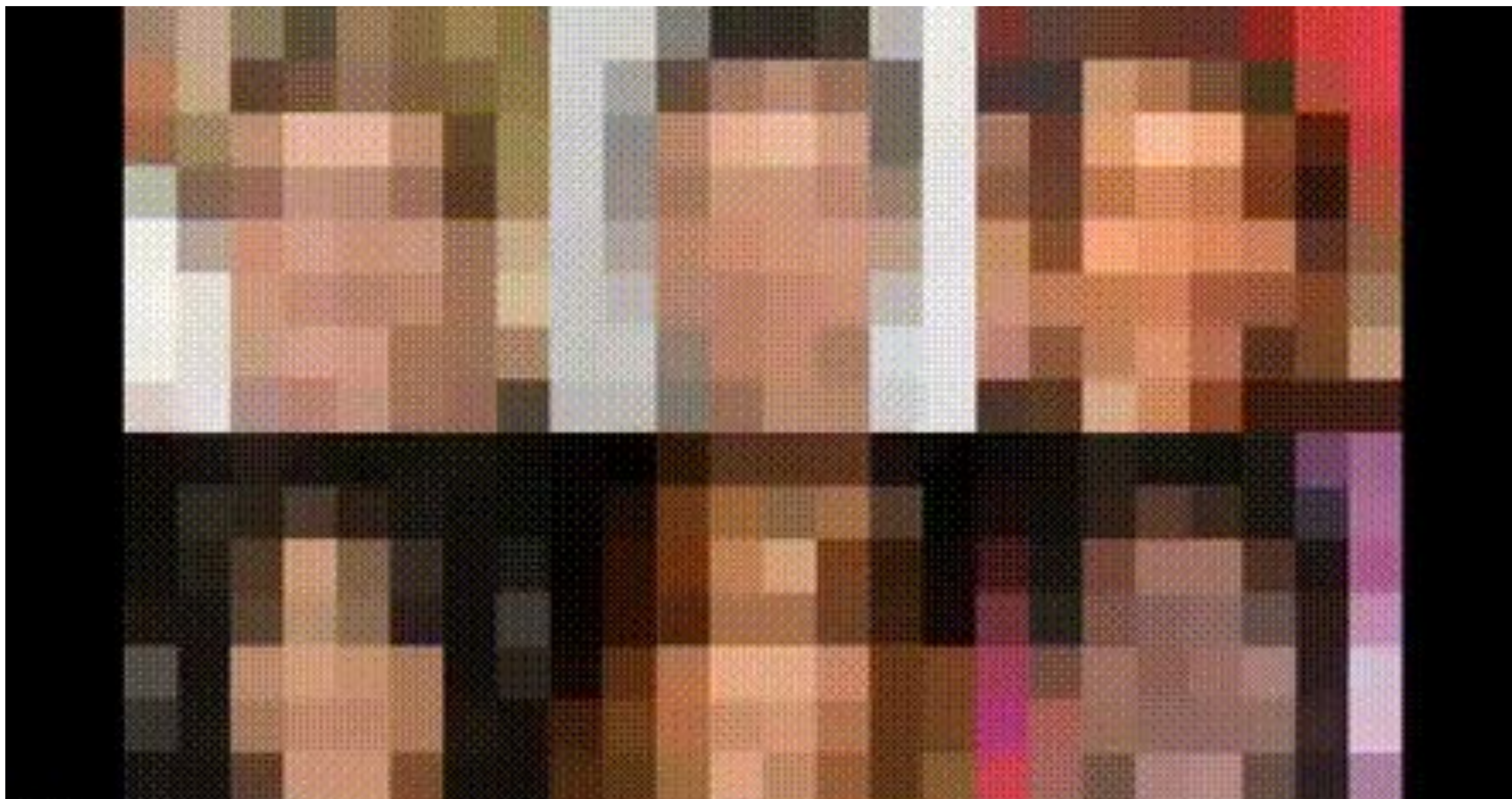Google trained a model that is able to generate classical music!

Style Transfer

Style Transfer is when a neural network is used to recreate a picture in the style of another image.

Demo

Generating Images of Faces

Machine learning models can generate lifelike images of people!

Fun Activity:
Neural Style Transfer

We'll need a few volunteers for this one

Fun Activity: Quick, Draw! with Google

https://quickdraw.withgoogle.com/

Kahoot!

click here

Closing Comments

Last Takeaways

- AI and ML are worth learning about!

- Get to know your peers!

- Feel free to reach out to us!

- Have fun!

ACM AI

Thanks!

Fill out our Feedback Form:
https://tinyurl.com/aimlworld
Check out our Github
Read our Blog