Genomic and Gene Editing

Genome editing (also called gene editing) is a group of technologies that give scientists the ability to change an organism's DNA.

THE ROLE OF AI IN GENE TECHNOLOGY

Genome editing is a discovery that is as delicate as it is powerful. It has long been a topic of controversy, speculation, and despite imperfections, excitement and innovation.
The same can be said for artificial intelligence, a field that boasts a growing list of interdisciplinary applications

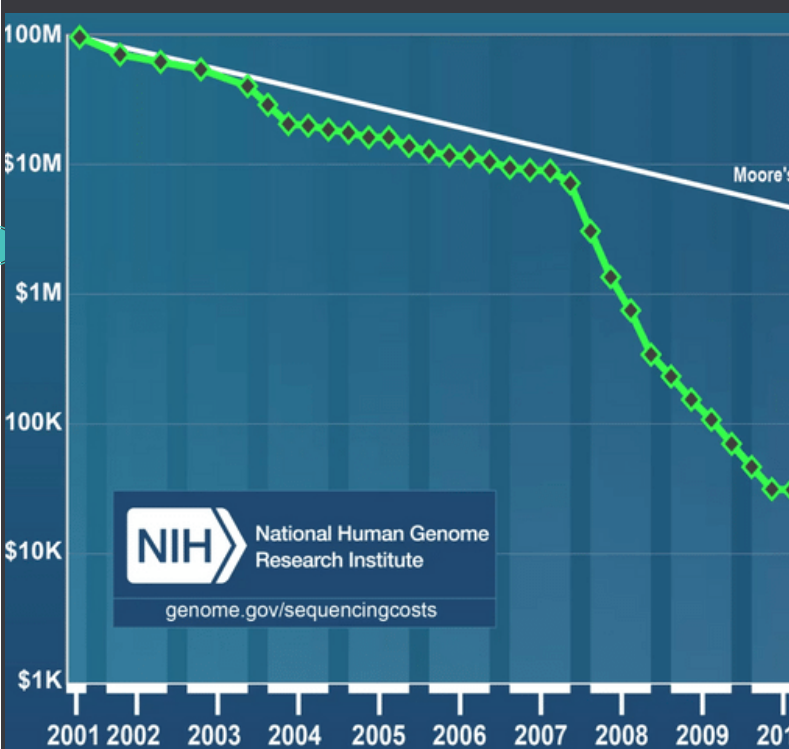## ARTIFICIAL INTELLIGENCE FINDS DISEASE-RELATED GENES

An artificial neural network can reveal patterns in huge amounts of gene expression data, and discover groups of disease-related genes.
To determine which groups of patients should receive a certain type of medicine, or identify the patients who are most severely affected.

AI AND GENOMICS BACKGROUND AND INSIGHTS UP FRONT

The ability to sequence DNA provides researchers with the ability to "read" the genetic blueprint that directs all the activities of a living organism. To provide context, the central dogma of biology is summarized as the pathway from DNA to RNA to Protein. DNA is composed of base pairs, based on 4 basic units (A, C, G and T) called nucleotides.
DNA is organized into chromosomes and humans have a total of 23 pairs.

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NIH National Human Genome Research Institute
genome.gov/sequencingcosts

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THE FUTURE OF AI IN GENOMICS

The opportunities for AI to accelerate the process of going from a dataset to medicine for patients will be the most important result of using machine learning. This applies to all aspects of pharmaceutical R&D, not just genomics.