The Brain Is Now Open Source

Jiajie Zhang, PhD, Dean

Glassell Family Foundation Distinguished Chair in Informatics Excellence

McWilliams School of Biomedical Informatics

May 15, 2025

April 19, 2025
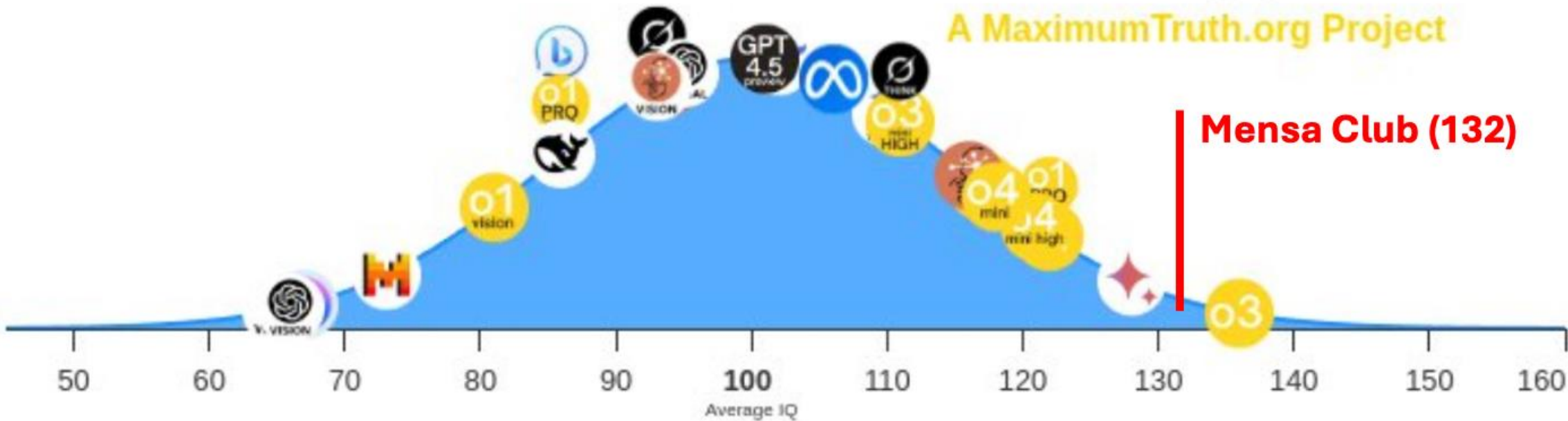
AI is now eligible for the Mensa Club (top 2% IQ)

IQ Test Results

Mensa Norway IQ Scores (Average of last 7 tests)

TrackingAI.org
Mensa Norway quiz
A MaximumTruth.org Project

Mensa Club (132)

50   60   70   80   90   **100**   110   120   130   140   150   160
Average IQ

AI has won Nobel Prizes

NOBELPRISET I FYSIK 2024
THE NOBEL PRIZE IN PHYSICS 2024

KUNGL. VETENSKAPS-AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES

John J. Hopfield
Princeton University, NJ, USA

Geoffrey E. Hinton
University of Toronto, Canada

"för grundläggande upptäckter och uppfinningar som möjliggör maskininlärning med artificiella neuronnätverk"

"for foundational discoveries and inventions that enable machine learning with artificial neural networks"

AI Wins the 2024 Nobel Prize in Physics

Jiajie Zhang
McWilliams School of Biomedical Informatics at University of Texas Health Science Center at Houston

October 8, 2024

NOBELPRISET I KEMI 2024
THE NOBEL PRIZE IN CHEMISTRY 2024

KUNGL. VETENSKAPS-AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES

David Baker
University of Washington
USA

Demis Hassabis
Google DeepMind
United Kingdom

John M. Jumper
Google DeepMind
United Kingdom

"för datorbaserad proteindesign"

"for computational protein design"

"för proteinstrukturprediktion"

"for protein structure prediction"

AI Wins Nobel Prize... Again!

Jiajie Zhang on LinkedIn · 3 min read

October 9, 2024Jiajie Zhang, PhDDean and ProfessorGlassell Family Foundation Distinguish...

AI could end disease in 10 years.

Demis Hassabis: 2024 Nobel Laureate in Chemistry

Latest ⌄   Local News ⌄   • Live ⌄   Shows ⌄   ⋯   ◉CBS NEWS

60 MINUTES | Full Episodes   Overtime   60 Minutes on Paramount+   60 Minutes Channel

60 MINUTES - NEWSMAKERS

Artificial intelligence could end disease, lead to "radical abundance," Google DeepMind CEO Demis Hassabis says

60

By **Scott Pelley**
April 20, 2025 / 6:57 PM EDT / CBS News

f   X   ▣

AI could solve shortages of Doctors and Teachers.

Bill Gates says AI could solve shortages for 2 key professions

Lee Chong Ming
Apr 16, 2025 | 1:47 AM ET

AI will be as smart as the smartest artists in 3 to 5 years

AI will fundamentally change what we teach and learn at schools

EX-GOOGLE CEO ERIC SCHMIDT: AI THAT IS 'AS SMART AS THE SMARTEST ARTIST' WILL BE HERE IN 3 TO 5 YEARS

LATEST M

196 SHARES

🇺🇸 APRIL 16, 2025

BY DANIEL TENCER

Eric Schmidt.

Photo: Guillaume Paumier/Creative Commons

Former Google CEO Eric Schmidt says the world is three to five years away from "artificial general intelligence" that will be equal to, if not better, than any human thinkers or creators today.

LEADERSHIP > EDUCATION

AGI Is Coming In 2025. Schools Urgently Need A Strategy

By Dan Fitzpatrick, Contributor. ⓘ Dan Fitzpatrick covers the intersection of ed... ⌄   Follow Author

Jan 07, 2025, 07:00am EST

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AGI Is Coming In 2025. Schools Urgently Need A Strategy
CQ-ROLL CALL, INC VIA GETTY IMAGES

The CEO of OpenAI, Sam Altman, is confident that his team "know how to build AGI." In a blog post, he followed up by explaining that by the end of 2025, we may see the "first AGI agents" joining the workforce. This revelation signals another year of fast progress ahead for AI. AGI - Artifical General Intelligence - will likely effect every facet of human life, from the economy to education.

April 21, 2025

AI is transforming government

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The Telegraph

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UAE first country to use AI to write laws

Gulf nation also plans to use technology for judicial rulings, as experts warn about its reliability

Melanie Swan

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United Arab Emirates, Artificial Intelligence, Middle East, Sheikh Mohammed bin Rashid Al Maktoum

21 April 2025 3:04pm BST

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Sheikh Mohammed bin Rashid al-Maktoum, centre, says that AI will make the process faster and more precise Credit: Christopher Pike/Bloomberg

Most of your friends will be AI

TECHNOLOGY

Zuckerberg's Grand Vision: Most of Your Friends Will Be AI

Meta's CEO is promoting a future where artificial intelligence is increasingly intertwined with people's lives

Meta founder and CEO Mark Zuckerberg at an AI developer conference last month. PHOTO: JEFF CHIU/ASSOCIATED PRESS

By *Meghan Bobrowsky*
May 7, 2025, 5:30 am EDT

May 12, 2025

New jobs will be created;
some jobs will be lost;
every job will be transformed.

THE WALL STREET JOURNAL.

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CIO JOURNAL

Why Moderna Merged Its Tech and HR Departments

The vaccine maker, which has partnered with OpenAI since 2023, is rethinking how it does workforce planning thanks to the growing capabilities of AI and other tech

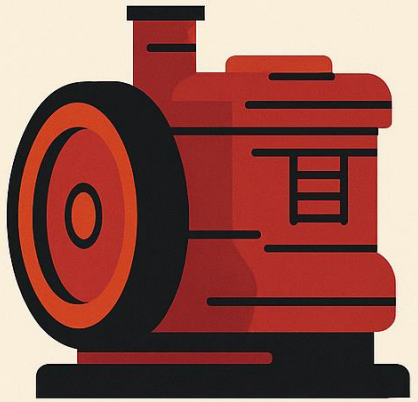*By Isabelle Bousquette* [Follow]

May 12, 2025 7:00 am ET

This is not hype.

Today is the James Watt moment...

for the human mind.

Engines liberated the body
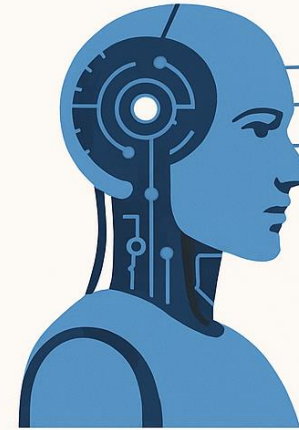
From Houston to New York

© Jiajie Zhang 2024
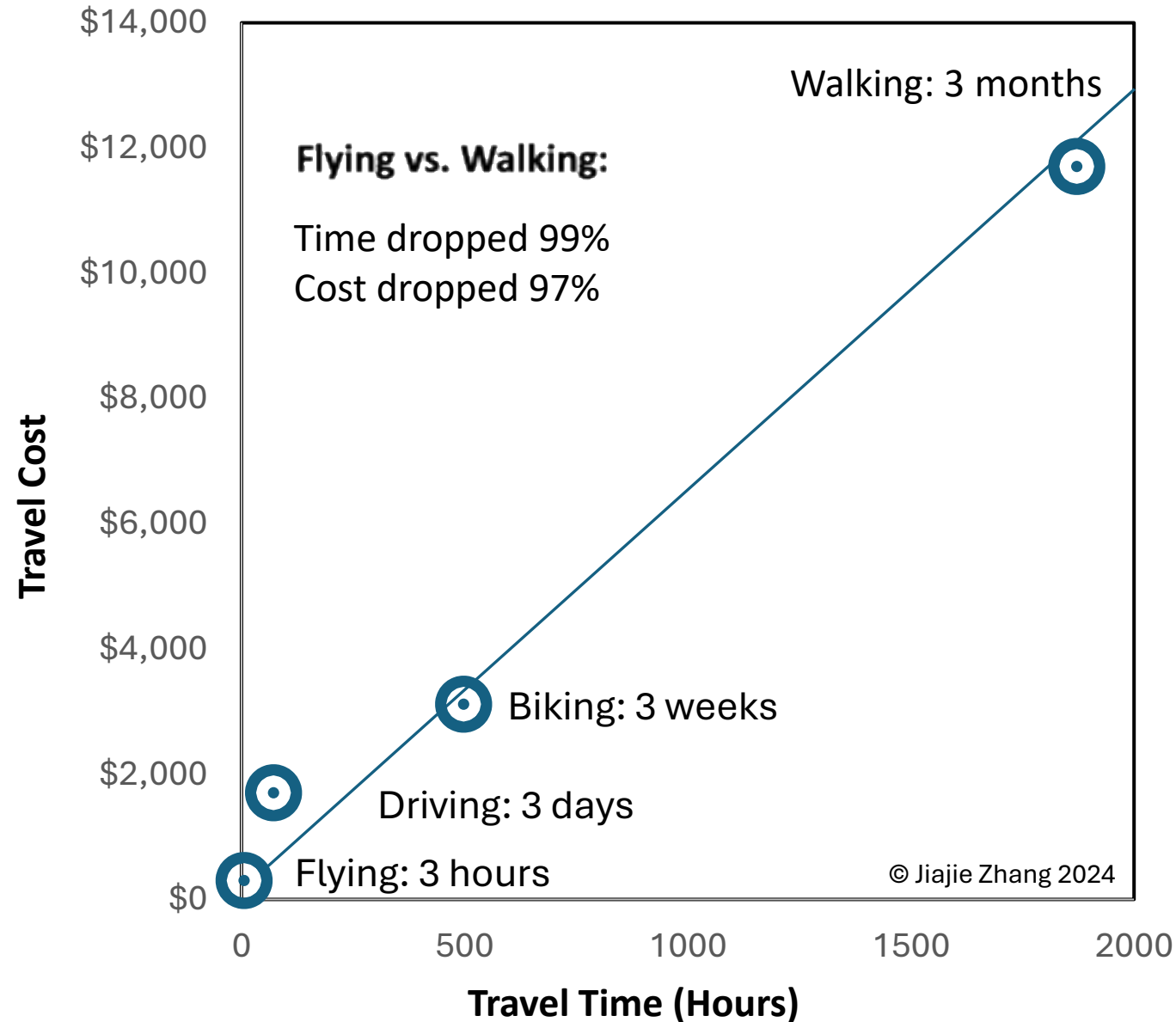
AI is now liberating the mind
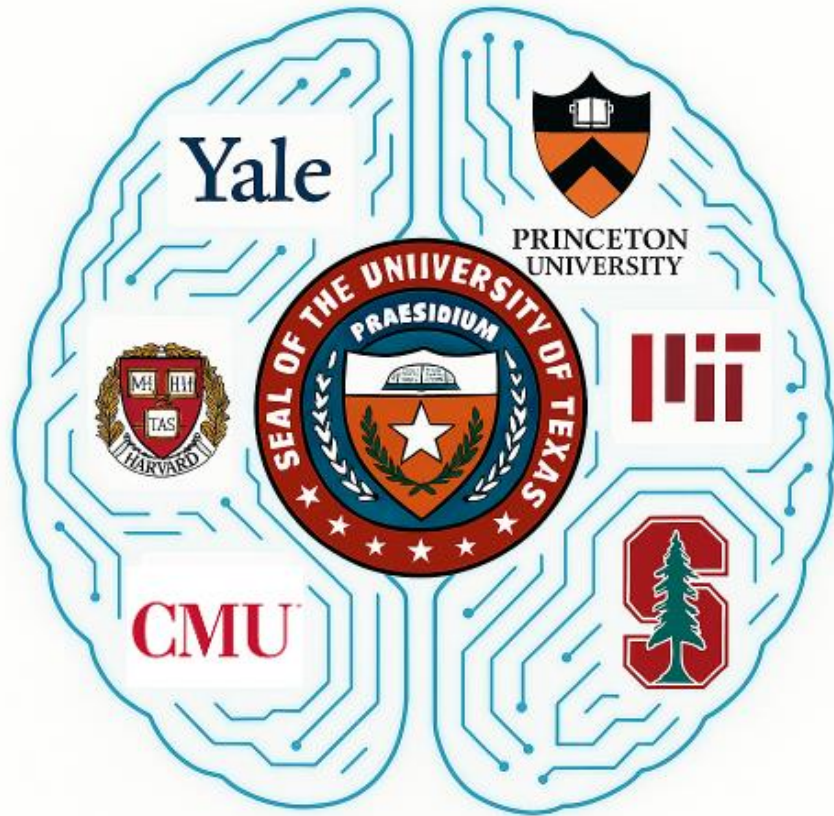
- 5000 years of knowledge, skills, and experience
- Speak all major languages
- Instant response to any request, anytime, anywhere
- Work for $0 - $20 per month

AI

Healthcare
- Medical diagnosis
- Treatment recommensdations
- Drug discovery

Finance
- Algorithmic trading
- Credit scoring
- Fraud detection

Transportation
- Autonomous vehicles
- Route optimization
- Traffic management

Education
- Personalized learning
- Intelligent tutoring systems
- Administrative automation

Manufacturing
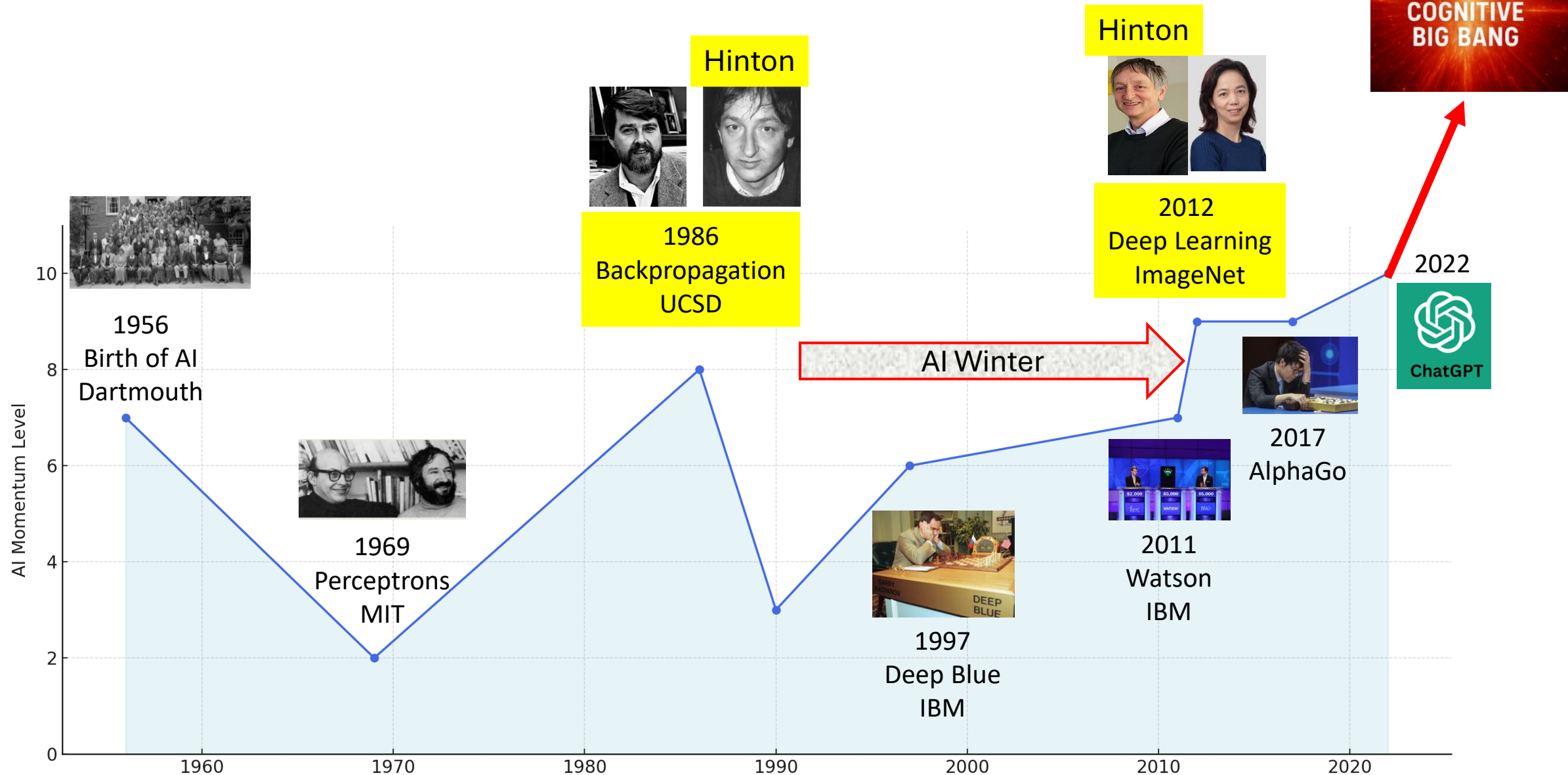- Predictive maintenance
- Quality control
- Process automation

Customer Service
- Chatbots

From Backpropagation to Deep Learning
— We've crossed from theory to irreversible societal impact

IRREVERSIBLE COGNITIVE BIG BANG

Hinton

Hinton

1986
Backpropagation
UCSD

2012
Deep Learning
ImageNet

2022

1956
Birth of AI
Dartmouth

AI Winter

1969
Perceptrons
MIT

ChatGPT

2017
AlphaGo

2011
Watson
IBM

1997
Deep Blue
IBM

AI Momentum Level

10

8

6

4

2

0

1960   1970   1980   1990   2000   2010   2020

Institute for Cognitive Science - UC San Diego
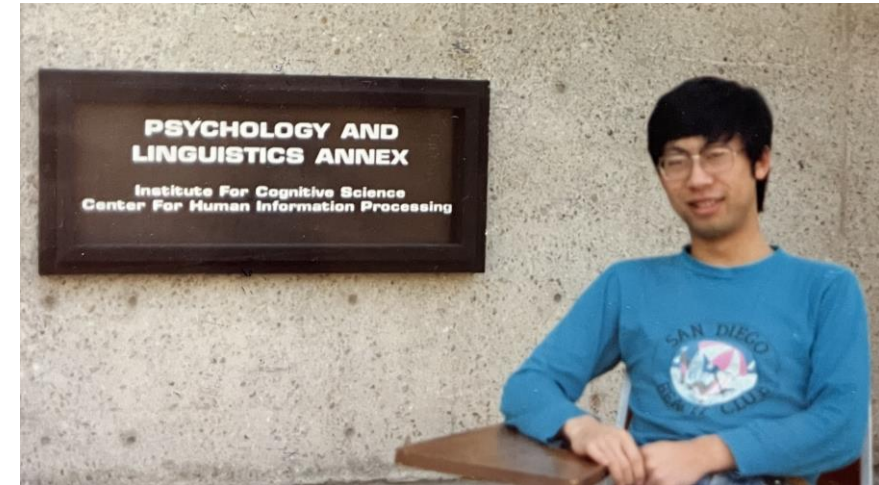
- ## The Birthplace of Deep Learning

- ## 1986

Letter | Published: 09 October 1986

Learning representations by back-propagating errors

David E. Rumelhart, Geoffrey E. Hinton & Ronald J. Williams

Nature 323, 533–536 (1986) | Cite this article

Rumelhart   Hinton   Williams
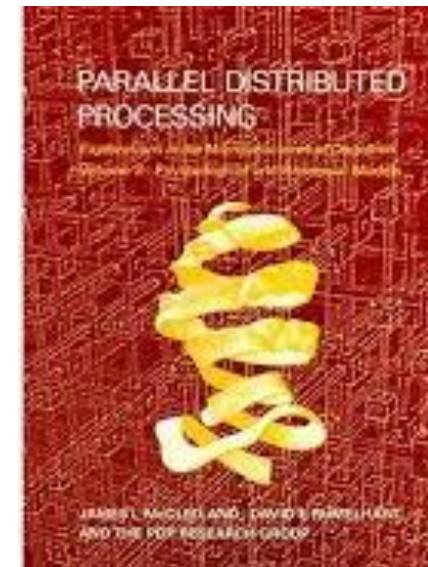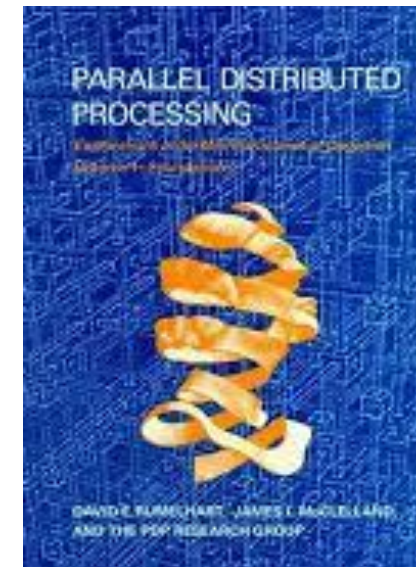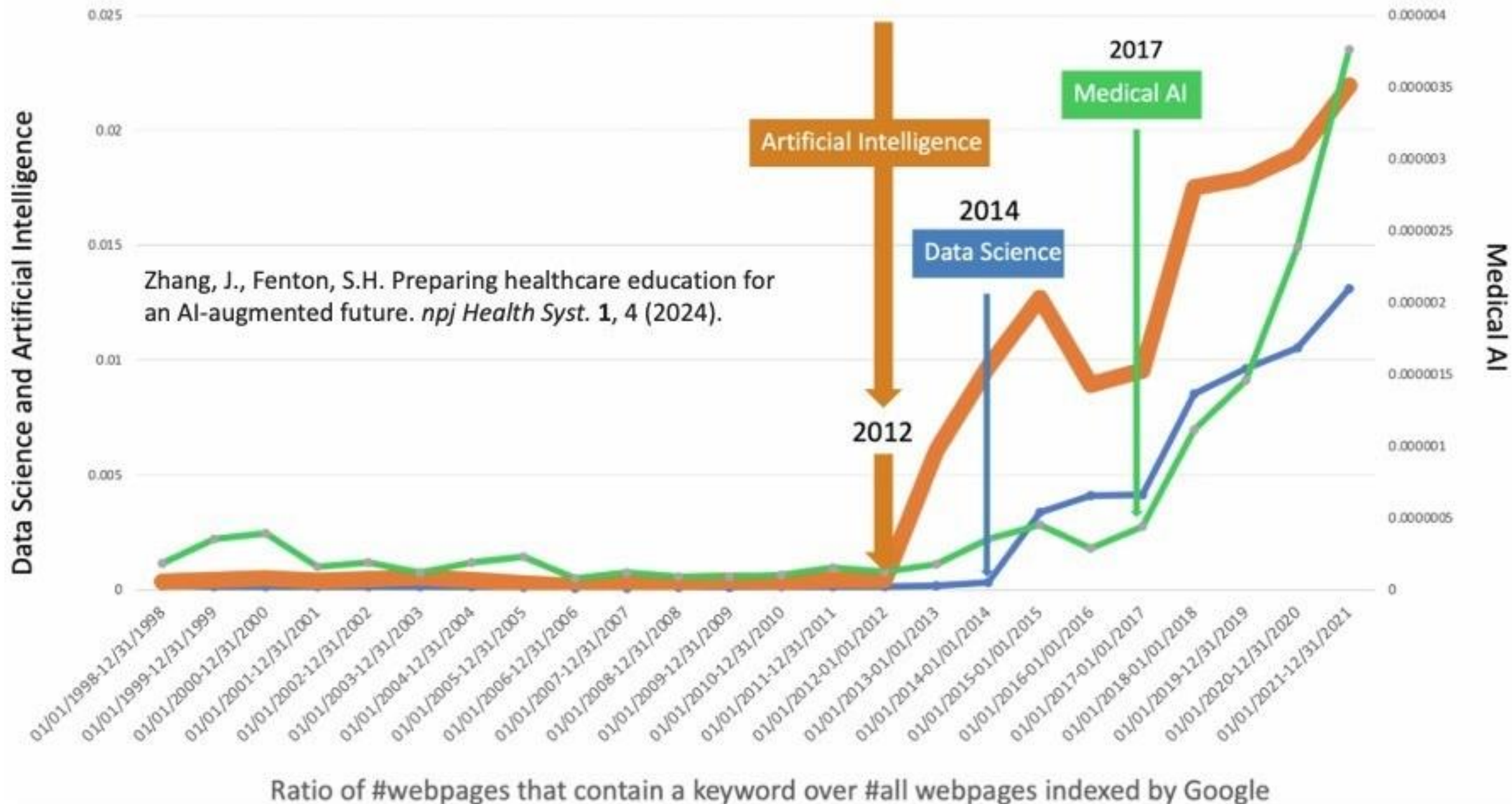
1st Teaching Assistant
for Parallel Distributed Processing (PDP)

2012 – The Dawn of the AI Revolution

Zhang, J., Fenton, S.H. Preparing healthcare education for an AI-augmented future. *npj Health Syst.* **1**, 4 (2024).

Ratio of #webpages that contain a keyword over #all webpages indexed by Google

2012 – The Dawn of the AI Revolution

Zhang, J., Fenton, S.H. Preparing healthcare education for an AI-augmented future. *npj Health Syst.* **1**, 4 (2024).

Ratio of #webpages that contain a keyword over #all webpages indexed by Google

UTHealth Houston
McWilliams School of
Biomedical Informatics
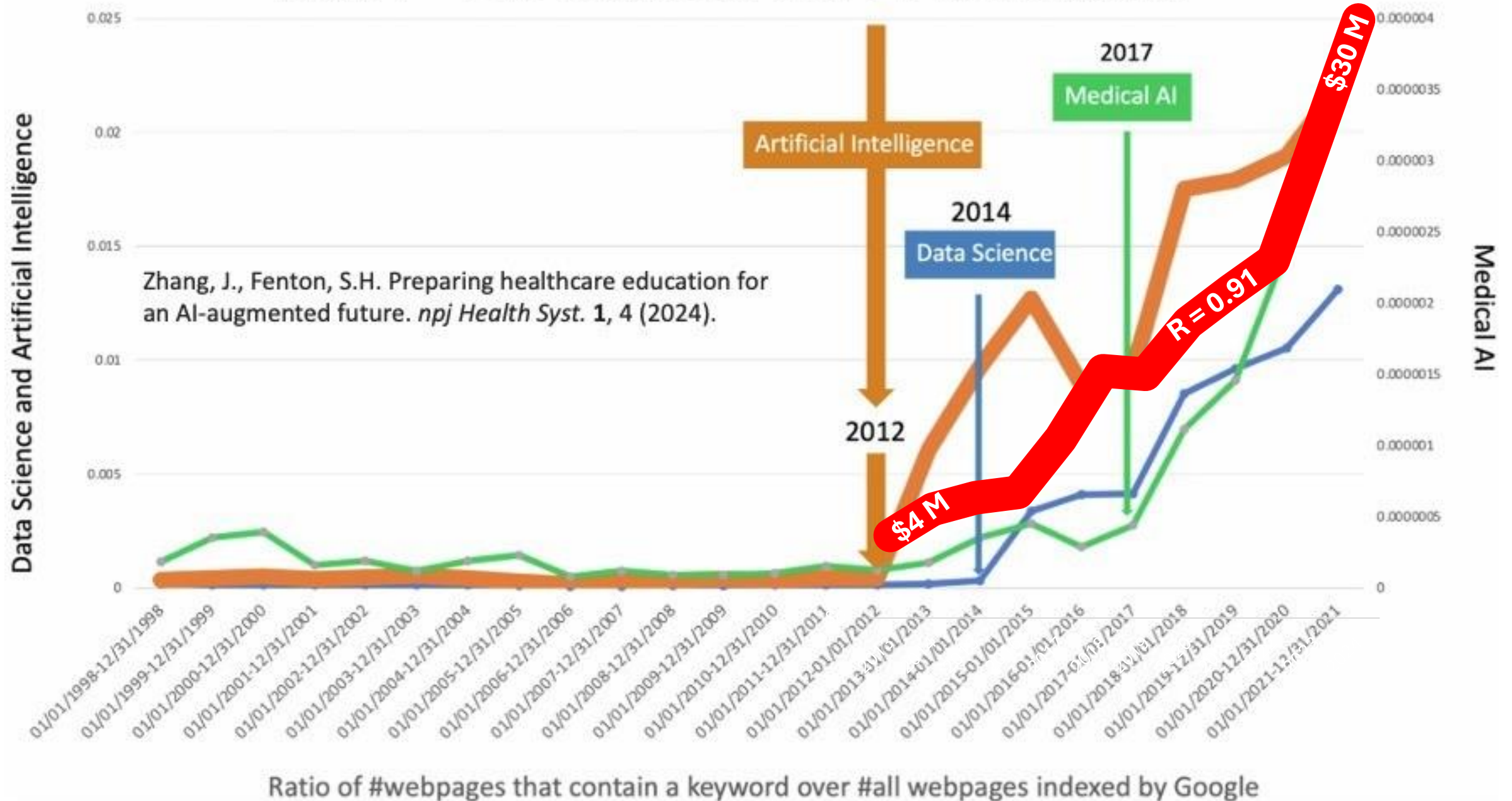
- **Headcount: (819)**
  - Faculty: 148 (67 regular; 81 adjunct)
  - Graduate Students: 536 (431 enrolled)
  - Staff : 135 (97 research; 38 admin)
  - GRAs/TAs: 73 (excluded in headcount)
- **3 Departments**
  - **Health Data Science and Artificial Intelligence**
  - Clinical and Health Informatics
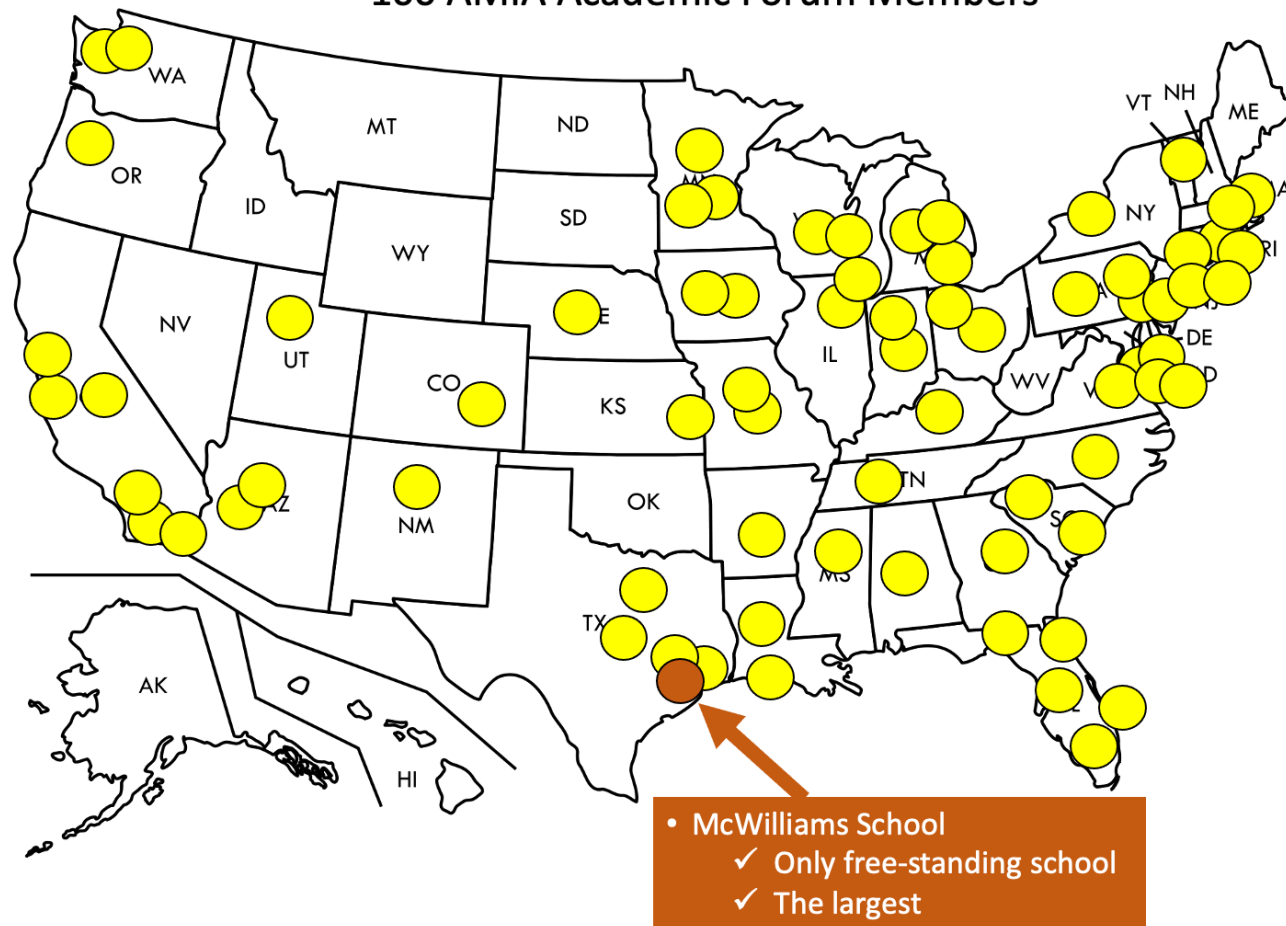 - Bioinformatics and Systems Medicine
- **Academic Programs**
  - 2 Doctoral Degrees: PhD and DHI
  - MD/MS, PharmD/MS, MPH/MS, etc.
  - 30 courses on AI and data science
- **Research**
  - Grant Awards: $30M (FY24)
  - Research Centers: 7 (5 on AI)
- **AI Applications in Clinical Operations**

~100 AMIA Academic Forum Members

- McWilliams School
  - ✓ Only free-standing school
  - ✓ The largest

TRANSFORMING DATA TO POWER HUMAN HEALTH™

What will AI never be capable of doing?

Peter J. Embí, MD, MS

Vanderbilt University Medical Center