The Stanford Advantage

Stanford HAI is actively seeking engagement with companies that share our mission to advance AI research, education, policy, and practice to **improve the human condition**. Industry members are an important part of the HAI ecosystem along with other stakeholders including academia, policymakers, public sector entities, and civil society. The HAI Industrial Affiliates Program offers the opportunity to collaborate and engage with faculty research and initiatives across Stanford that align with specific member priorities. The benefits of the HAI industry programs are **flexibility**, **customization** and a **measurable** return on contribution. The programs create substantial wallets to support HAI mission-aligned research collaborations, and also include automatic membership in the Stanford Digital Economy Lab in addition to generating unique opportunities for student engagement.

Current Members

accenture Google IBM McKinsey & Company SCB^x Hanwha Life

PEPSICO WELLS FARGO LVMH SAP AMERICAN EXPRESS Infosys pwc

HAI Industrial Affiliates Program

Membership cost: $1M per year
Minimum duration: 1 year

**Stanford University
Human-Centered
Artificial Intelligence**

$550K wallet

The $1M membership gives access to a $550K customizable fund to seed and support customized research and engagement activities across Stanford that are aligned with our members' AI and ML priorities.

The wallet can be used toward the following:

Research: Collaborate with HAI

Research Collaborations:

Members collaborate with Stanford faculty and researchers on projects that are aligned with their biggest R&D challenges and allow for a range of measurable outcomes.

Visiting Scholars/ Industry Affiliates:

Experienced researchers from member companies join with a Stanford faculty member to study and engage in research project(s) under their direction.

FMAs:

A Stanford PhD student (Fellow) works closely with an expert (Mentor) from a member company to conduct advanced research under the guidance of a Stanford faculty (Advisor).

Student Engagement & Recruitment:

Affilate members enhance their company's visibility across campus.

Additional Benefits: For Our Members
- Access to Executive Breakfast Seminars and the HAI Startup Series
- Membership in the Stanford Digital Economy Lab
- Semi-annual member meetings and access to exclusive HAI events with faculty, students and industry

> Our close collaboration with Stanford HAI reinforces our strong commitment to building and using relevant, reliable, and responsible AI.
>
> **Juergen Mueller, Chief Technology Officer and Executive Board Member, SAP**

> Collaborating with the team at HAI and their renowned list of talented academics will allow us to gain insights that will help shape the future of artificial intelligence.
>
> **Athina Kanioura, Chief Strategy and Transformation Officer, PepsiCo**

HAI Industrial Affiliates Program

General Focus Areas

The Stanford HAI Industrial Affiliates Program is an exciting opportunity for businesses to engage with Stanford in a deeper way across core focus areas related to AI.

Industry members that share our mission to advance AI research, education, policy and practice to **improve the human condition** are an important part of the HAI ecosystem alongside other stakeholders including academia, policymakers, public sector entities, and civil society. The benefits of the HAI industry programs are **flexibility, customization** and a **measurable** return on contribution.

The general focus areas of the HAI Industrial Affiliates program offer a diverse array of options to collaborate and engage with faculty research and initiatives across Stanford that align with specific member priorities. These **focus areas** include:

> "
> The Stanford HAI Industry Program is specifically designed to engage companies with the Stanford AI community of faculty, students, and experts to explore the unique problems and challenges that these companies or industries face.
> "
>
> **Fei-Fei Li, Sequoia Professor, Computer Science Department; Denning Co-Director, Stanford HAI**

AI-Augmented Decision Making
Michael Bernstein

VR/AR
Jeremy Bailenson

Cybersecurity
Dan Boneh
Andrew Grotto

AI-Augmented Communication
Jeff Hancock

AI Fairness and Explainability
Carlos Guestrin

Foundation Models
Percy Liang

Digital Economy
Erik Brynjolfsson

AI Safety
Clark Barrett

Human-Computer Interaction
James Landay

52% of Fortune 500 companies were extinguished by digital disruption between 2000 and 2014[1]

50% of the S&P 500 in 2018 was forecasted to be replaced in just ten years[2]

$15.7T in value will be added by AI to the global economy by 2030[3]

$1.4B in annualized value can be gained by AI-led transformation of a Fortune 500 company[4]

1 Wang, R. (2014, February 18). Research Summary: Sneak Peeks from Constellation's Futurist Framework and 2014 Outlook on Digital Disruption. Constellation Research. Retrieved March 1, 2023
2 Anthony, S. D., Viguerie, S. P., Schwartz, E. I., & Landeghem, J. V. (2018a, February). 2018 Corporate Longevity Forecast: Creative Destruction is Accelerating. Innosight. Retrieved March 1, 2023
3 PwC. (n.d.). Global Artificial Intelligence Study: Sizing the Prize. PricewaterhouseCoopers. Retrieved March 1, 2021
4 (n.d.). Incorporate Enterprise A.I. Now or Risk Getting Disrupted. Fortune + C3.Ai. Retrieved March 1, 2021

HAI Industrial Affiliates Program

Financial Services & AI

This targeted Industrial Affiliates Program centers on the intersection of Financial Services & AI. **Faculty focus areas** specific to the finance sector provide the optimum environment for banks, fintech, insurance, and other financial services institutions to engage with Stanford at the nexus of their most fundamental AI challenges:

> The opportunity to work with world-class researchers and faculty members, as well as the dedicated staff from HAI, has been truly rewarding so far.
>
> **Lan Guan, Chief AI Officer, Accenture**

> Our relationship with Stanford HAI has been transformative for SCBX, catalyzing a new era of AI integration in our operations.
>
> **Kaweewut Temphuwapat, Head of R&D, SCBx**

Blockchain and Decentralized Systems
Dan Boneh
David Tse

AI in Risk Management and Insurance
Jose Blanchet

Design and Regulation of Financial Markets
Darrell Duffie

Graph Machine Learning in Financial Services
Jure Leskovec

Optimization in Financial Services
Stephen Boyd &
Yinyu Ye

AI in Investment, Lending and Trading
Markus Pelger &
Kay Giesecke

AI Governance and Regulation
Laura Blattner &
Jann Spiess

Social Impact and Financial Services
Susan Athey

The potential annual value of AI and analytics is projected up to

$1 trillion
for global banking[1]

More than half of Financial Services leaders believe artificial intelligence will create the

biggest change
in how financial services are delivered over the next two years[2]

According to the 2018 Growth Readiness Study, asset managers who are embracing big data and analytics are found to be growing their revenue

1.5 times
more quickly than the rest of financial services[3]

1 McKinsey & Company. (n.d.). The Executive's AI Playbook. McKinsey & Company, QuantumBlack. Retrieved November 28, 2023
2 (2018, August 23). How JPMorgan is Preparing for the Next Generation of Consumer Banking. CBInsights. Retrieved November 28, 2023
3 (2018, June 26). Financial Services Firms with Modernized Operating Models Are Growing Nearly Twice as Fast as Peers, New FIS Research Reveals. FIS Global. Retrieved November 28, 2023

Stanford University
Human-Centered
Artificial Intelligence

This program centers on the intersection of Consumer Goods, Retail & AI. **Faculty focus areas** specific to the sector provide the optimum environment for manufacturers, suppliers, distributors, retail chains and consumer goods and retail corporations to engage with Stanford at the nexus of their most fundamental AI challenges:

> " We are very excited to be the first group in our field to join Stanford HAI and its leading scientific team and contribute to shaping the future.
>
> **Anca Marola, Chief Data Officer, LVMH**

Robotics and Human-Robot Interaction
Chelsea Finn
Dorsa Sadigh
Jeannette Bohg

AI and Organizational Design
Susan Athey
Melissa Valentine

Electronic Device Design
Zhenan Bao

Retail AI
Ashwin Rao

Molecules and Materials
Todd Martinez
Eric Appel

Supply Chains
Kostas Bimpikis

$109B: Record annual retail tech funding

Global retail tech funding boomed in 2021, passing $100B for the first time, and more than doubling 2020's total. Deals rose 25%. E-commerce and supply chain tech funding hit new records. In-store retail tech funding also nearly tripled as stores prioritized inventory management, payments, and shopper tracking tech.[8]

291: Number of mega-rounds: 140% more than 2020

71% of annual funding came from mega-rounds of $100M+. These big deals flowed toward delivery tech, particularly for food. Investors also funneled money to platforms and tools to enable faster and more efficient order fulfillment.[1]

97: Retail tech unicorns born in 2021

A record 97 companies hit a $1B+ valuation in 2021, nearly quadruple the number born in 2020 and accounting for half of the current retail tech unicorn herd (192). The highest-valued new unicorns reach across e-commerce, from marketplaces to social commerce platforms to delivery tech.[8]

184%: YoY growth in e-commerce funding

Funding hit a record $54B. The biggest deals went to back-end tech, including payments and brand aggregators. But it was also a huge year for online marketplaces, from marketplace tech enablement to platforms selling cars and beauty products.[8]

1 (2022 January 27). State of Retail Tech 2021 Report. CBInsights. Retrieved November 28, 2023

HAI Industrial Affiliates Program

Generative AI

HAI — Stanford University Human-Centered Artificial Intelligence

The Generative AI program brings together **faculty focus areas** from a broad range of disciplines to enable companies from every industry to attain a visionary perspective of all that is possible through AI, even as they engage their most fundamental AI challenges:

Foundation Models
Percy Liang
Tatsu Hashimoto
Diyi Yang
Tengyu Ma

Digital Economy and the Future of Work
Erik Brynjolfsson
Michael Bernstein

Speech and Language Interfaces
Dan Jurafsky
Chris Manning
Monica Lam
James Landay

Computer Vision
Fei-Fei Li
Serena Yeung
Surya Ganguli
James Zou

Graph Neural Networks
Jure Leskovec
Carlos Guestrin

Deep Generative Models
Stefano Ermon

Policy, Regulation and Ethics
Rob Reich
Dan Ho

Metaverse
Jiajun Wu
Jeremy Bailenson
Gordon Wetzstein
Karen Liu
Fei-Fei Li

Physics Sims and Computer Graphics
Karen Liu
Maneesh Agrawala
Jiajun Wu
Fei-Fei Li

Medical Imaging
Akshay Chaudhari
Curtis Langlotz
Ehsan Adeli

Education
Chris Piech
Hari Subramonyam
James Landay

Building an AI Powered Organization
Melissa Valentine
Michael Bernstein

Generative AI is predicted to add up to **$4.4T** to the global economy[1]

Nearly **$500B** has been invested in AI over the last 5 years by global corporations[2]

One study found Generative AI could replace the equivalent of 300m jobs through automation of key tasks and other studies have found the use of Generative AI can increase developer productivity by up to **55%** and white-collar worker productivity by more than **40%**[3]

Nearly **40%** of S&P 500 cited "AI" during Q2 earnings in 2023, with 177 firms mentioning AI plans[4]

1 Chiu M., Hazan, E., Roberts, R., et al. (2023, June 14). The Economic Potential of Generative AI: The Next Productivity Frontier. McKinsey & Company. Retrieved November 28, 2023
2 Lynch, S. (2023, April 3). 2023 State of AI in 14 Charts. Stanford HAI. Retrieved November 28, 2023
3 (2023, April 5). Generative AI Could Raise Global GDP by 7%. Goldman Sachs. Retrieved November 28, 2023; Dell'Acqua, F., McFowland, E., Mollick, E. R., et al. (2023). Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality. *Harvard Business School Technology & Operations Mgt. Unit Working Paper*, (24-013).
4 Butters, J. (2023, September 8). Highest Number of S&P 500 Companies Citing "AI" on Q2 Earnings Calls in Over 10 Years. Factset. Retrieved November 28, 2023

1 **Clarifying AI priorities** brings the coming year into focus and starts the technical matchmaking process

2 **Aligning together** on metrics for success, research project scopes, and concrete faculty proposals

3 **Engagement patterns** and expectations are set for each project, dictating frequency and medium for communication

4 **Projects launch** with check-ins during the year; members engage with cross-cutting HAI programming

5 **Year-end results** are showcased and collaborative discussion explores whether to renew projects or reassess

> "Joining Stanford HAI... gives us an opportunity to open up Silicon Valley with its leading-edge thinking, concentration of talent, and ecosystem of partners to all of our clients.
>
> **Ben Ellencweig, Senior Partner, McKinsey**

Stanford University
Human-Centered
Artificial Intelligence

For more information on any of the HAI industry programs and engagement opportunities, contact:

Panos Madamopoulos, HAI Managing Director of Industry Programs & Partnerships, panosmm@stanford.edu
Marc Gough, HAI Industry Partnerships & Engagement Manager, mjgough@stanford.edu
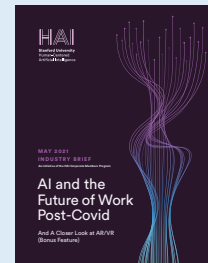**Ahmad Rushdi,** HAI Senior Manager of Research Communities, rushdi@stanford.edu
David Levi, HAI Industry Partnerships Program Manager, dalevi@stanford.edu
Sha Sajadieh, HAI Industry Partnership Program Manager, shahed@stanford.edu
Hyla Shain, HAI Partnerships Administrator, hylashai@stanford.edu

Join us in our mission for human-centered AI and accelerate your AI journey today.

Check out our Industry Briefs at hai.stanford.edu/industry-briefs

HAI

OCTOBER 2021
INDUSTRY BRIEF

Financial Services and AI

HAI

MARCH 2021
INDUSTRY BRIEF

Healthcare & Life Sciences

HAI

MAY 2021
INDUSTRY BRIEF

AI and the Future of Work Post-Covid

And A Closer Look at AR/VR (Bonus Feature)

"

As the HAI Industry Program has matured over the last couple of years, we find increased opportunities for our researchers to engage with faculty and students to advance areas critical to the future of AI. In addition to the benefits of engaging across a broad community on technology, ethics, and policy, we are also beginning to see specific advances in AI techniques and approaches that are of mutual interest.

Jeffrey J. Welser, COO IBM Research, VP Exploratory Science & University Collaboration, IBM

"

The HAI Founding Members Program allows for customizable, project-based collaborations that engage participating Googlers with new topics, methods, and people in the domain of Human-Centered AI. We look forward to expanding on these initiatives — Google recognizes that HAI's interdisciplinary perspective is key to shaping an inclusive AI future.

Jeff Dean, Chief Scientist, Google DeepMind and Google Research

"

The HAI Industry Program continues to be a great enabler for us to engage with the broader ecosystem across research and industry adjacencies. The insights and value we derive from it have helped us tune our new to market offerings and reach a better product market fit.

Chintan Mehta, CIO, Head of Digital Technology and Innovation, Wells Fargo