Growing up together in the AI era

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The Michigan Institute for Data and AI in Society
University of Michigan

June 25, 2025

What I mean:

- AI is already transforming organizations and lives
- We need to figure out many questions for AI adoption
- Different sectors / organizations provide complementary strengths and perspectives
- We need to work together and “grow up” together in the AI era

The University of Michigan

8000 faculty, 50,000 students

110 Graduate programs among top 10 in the US

>$2B annual research expenditure

#1 (sometimes #2 or #3) public university by various ranking systems

The University of Michigan

57 National Championships in various sports

8000 faculty, 50,000 students

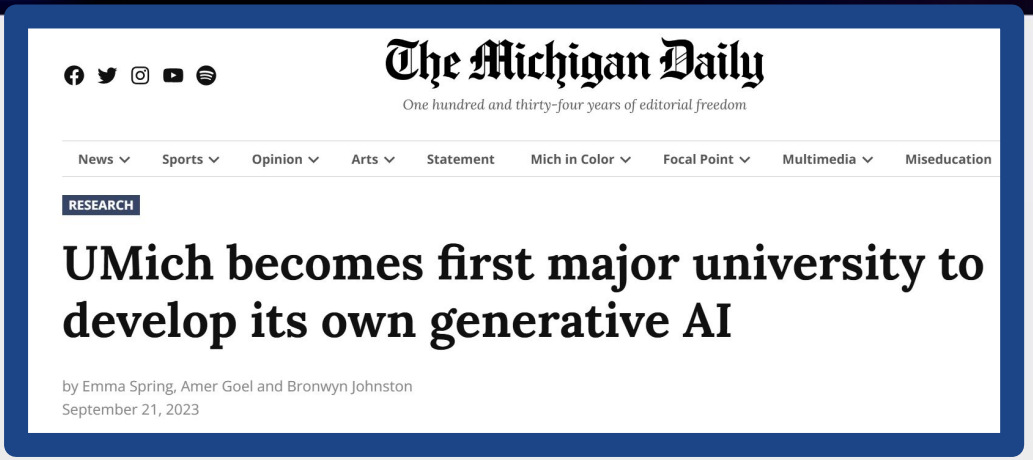
110 Graduate programs among top 10 in the US

>$2B annual research expenditure

#1 (sometimes #2 or #3) public university by various ranking systems

Our AI Effort

MIDAS



The Michigan Daily

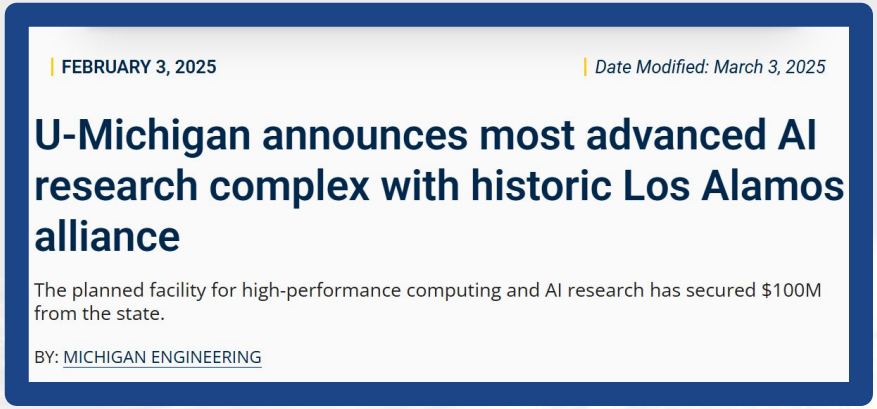
One hundred and thirty-four years of editorial freedom

News Sports Opinion Arts Statement Mich in Color Focal Point Multimedia Miseducation

RESEARCH

UMich becomes first major university to develop its own generative AI

by Emma Spring, Amer Goel and Bronwyn Johnston
September 21, 2023



FEBRUARY 3, 2025 | Date Modified: March 3, 2025

U-Michigan announces most advanced AI research complex with historic Los Alamos alliance

The planned facility for high-performance computing and AI research has secured $100M from the state.

BY: MICHIGAN ENGINEERING

The Michigan Daily

Menu

RESEARCH

UMich partners with OpenAI to fund and support faculty artificial intelligence projects

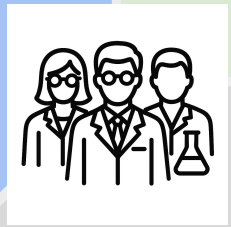
by Emma Sulaiman
March 17, 2025

Michigan Institute for Data and AI in Society

MIDAS

One of the largest POSTDOCTORAL training programs on AI for science

FACULTY
>660

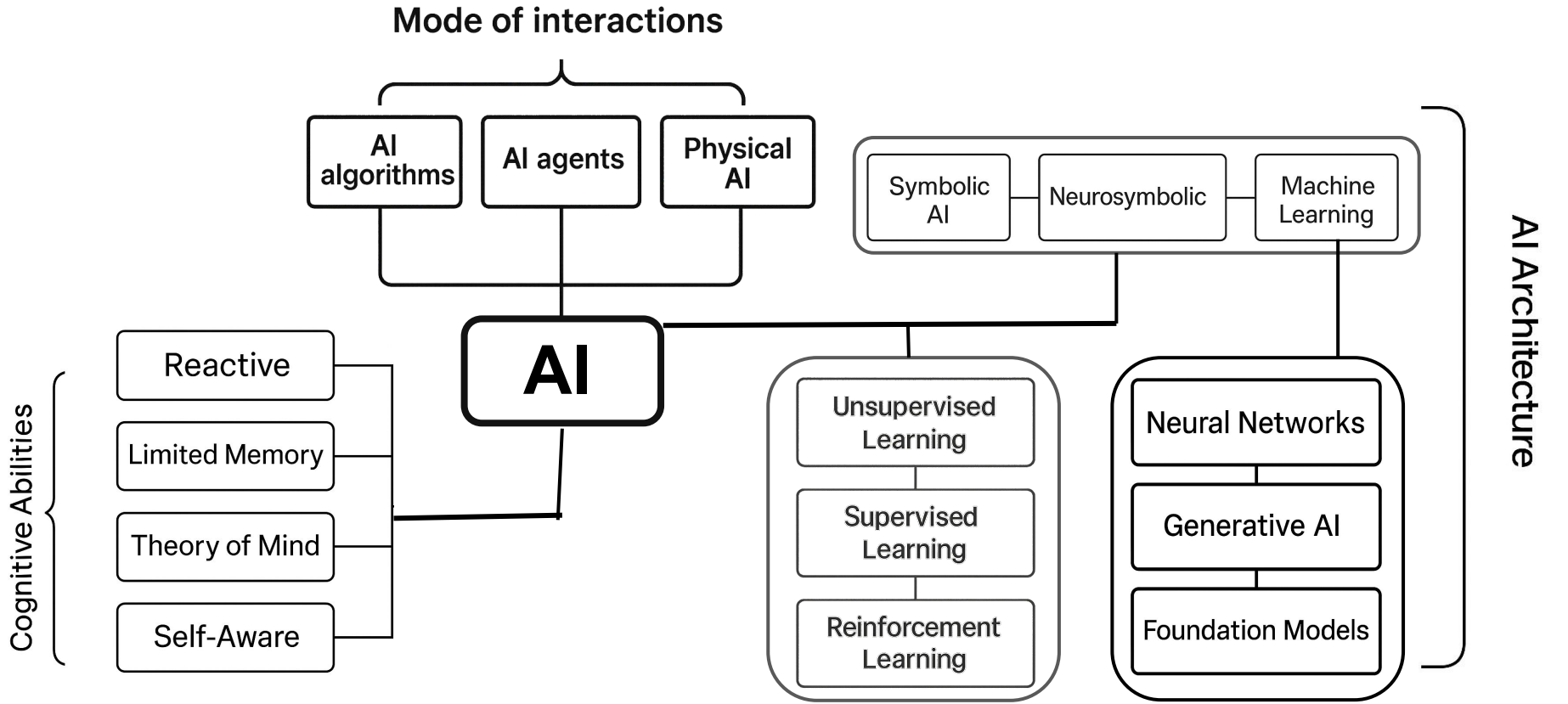


>1000
STUDENTS

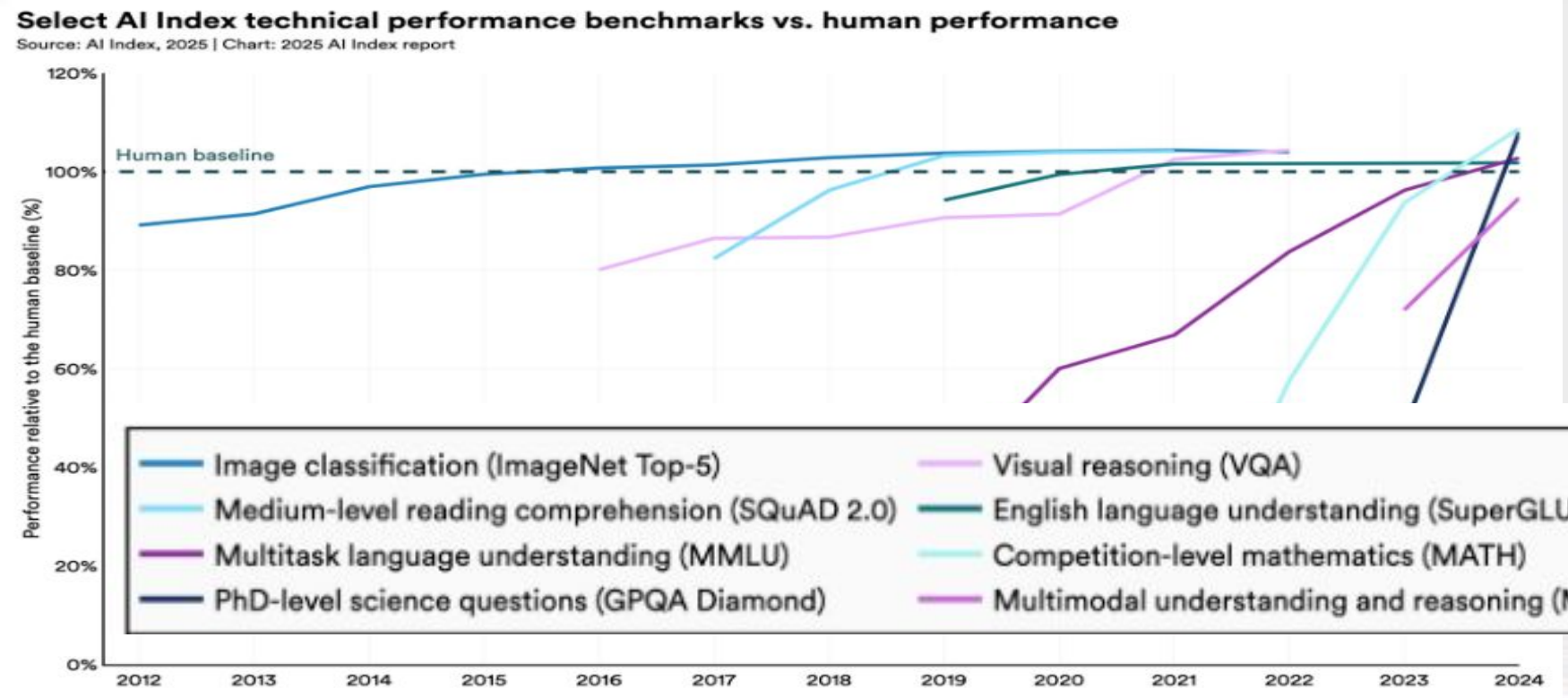
Research	Training	Collaboration

Adopt AI for research
Ensure trustworthiness of research
Reimagine academic research
Maximize societal impact

AI is Dazzling Us

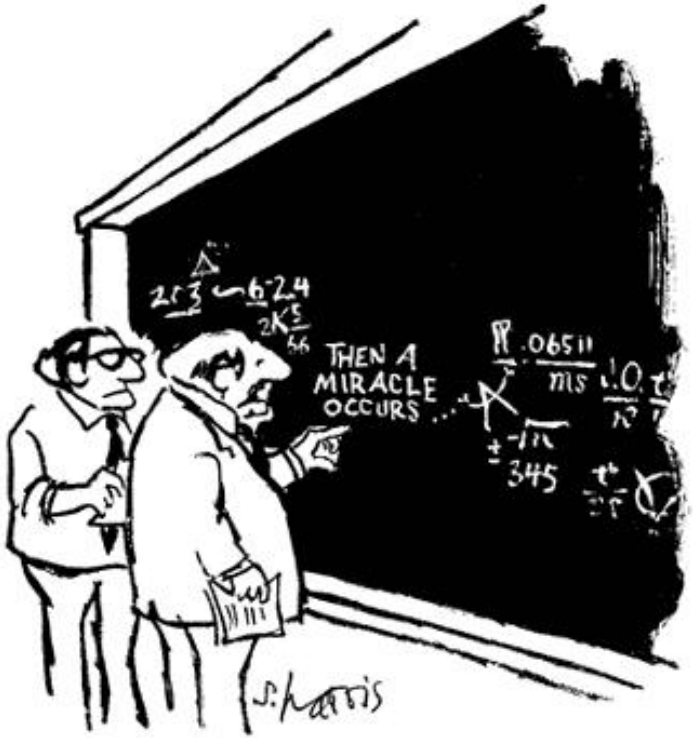


AI is Dazzling Us

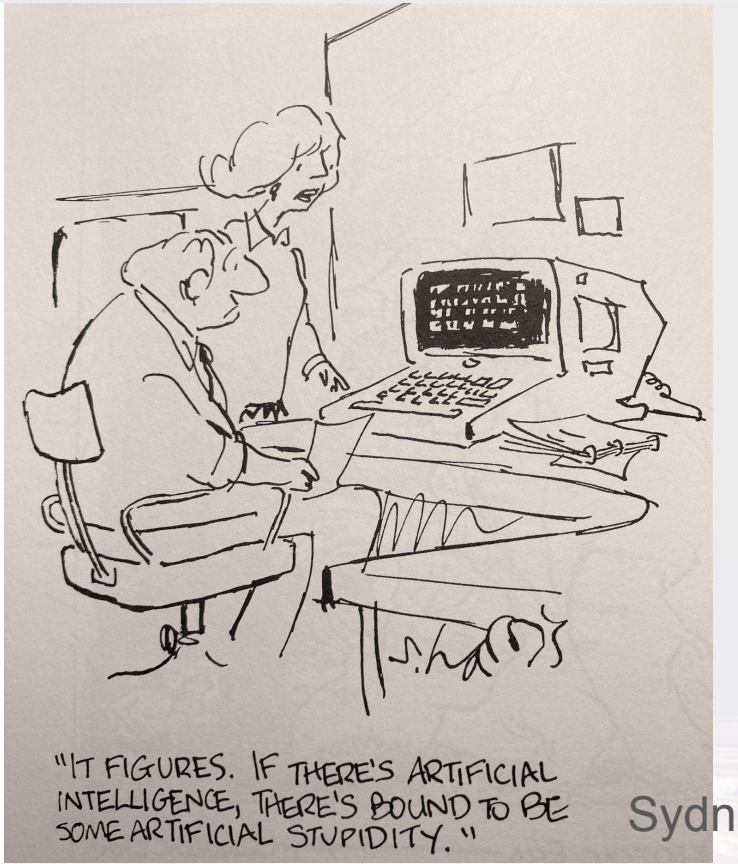


The AI Index 2025 Annual Report

We Are All “Beginners”



“I think you should be more explicit here in step two.”



Sydney Harris cartoons

Is AI “ The Wild West”?

“Growing Up Together” in the AI Era

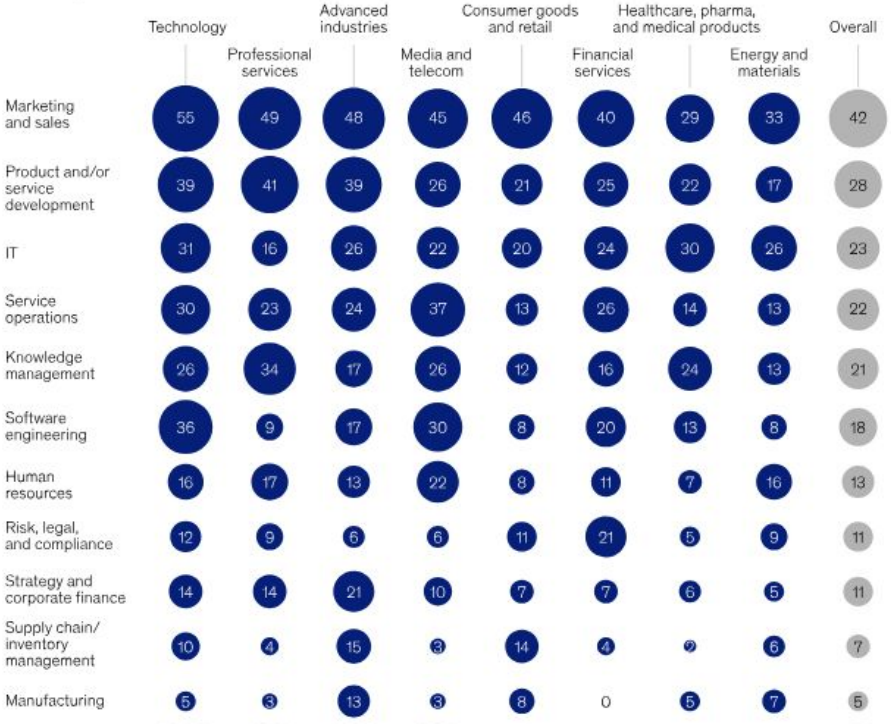
We are need to understand:

- What can AI do in my organization?
- What do we ***want*** AI to do?
- How can we make it happen and how can we do it right?
- Then what do ***we*** do?

Generative AI in Industry

Organizations across industries have begun to use gen AI in marketing and sales, though other uses vary by industry.

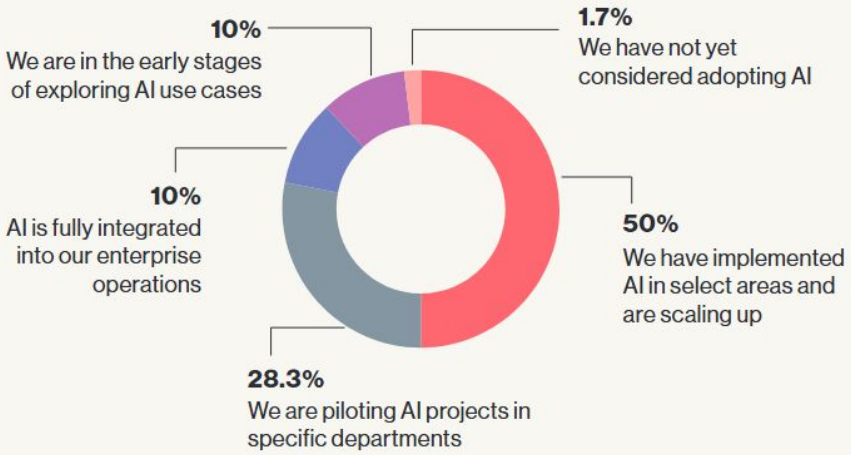
Business functions in which respondents' organizations are regularly using gen AI, by industry,[1]
% of respondents



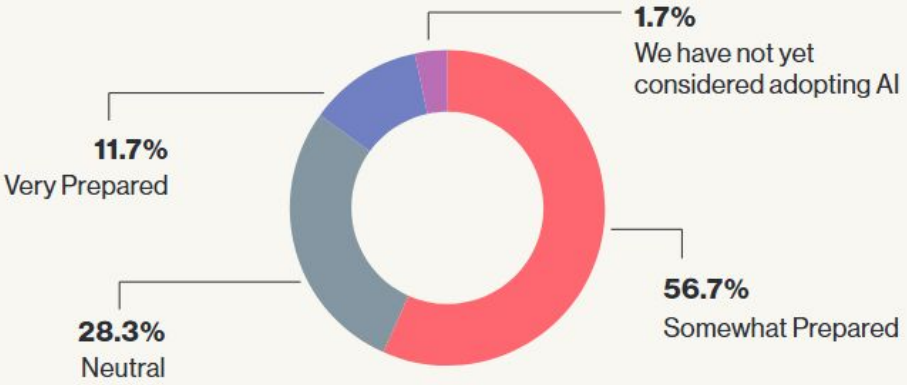
McKinsey and Company, 2025

Organizational Preparedness - Industry

Regarding AI Adoption, where are you on your journey?

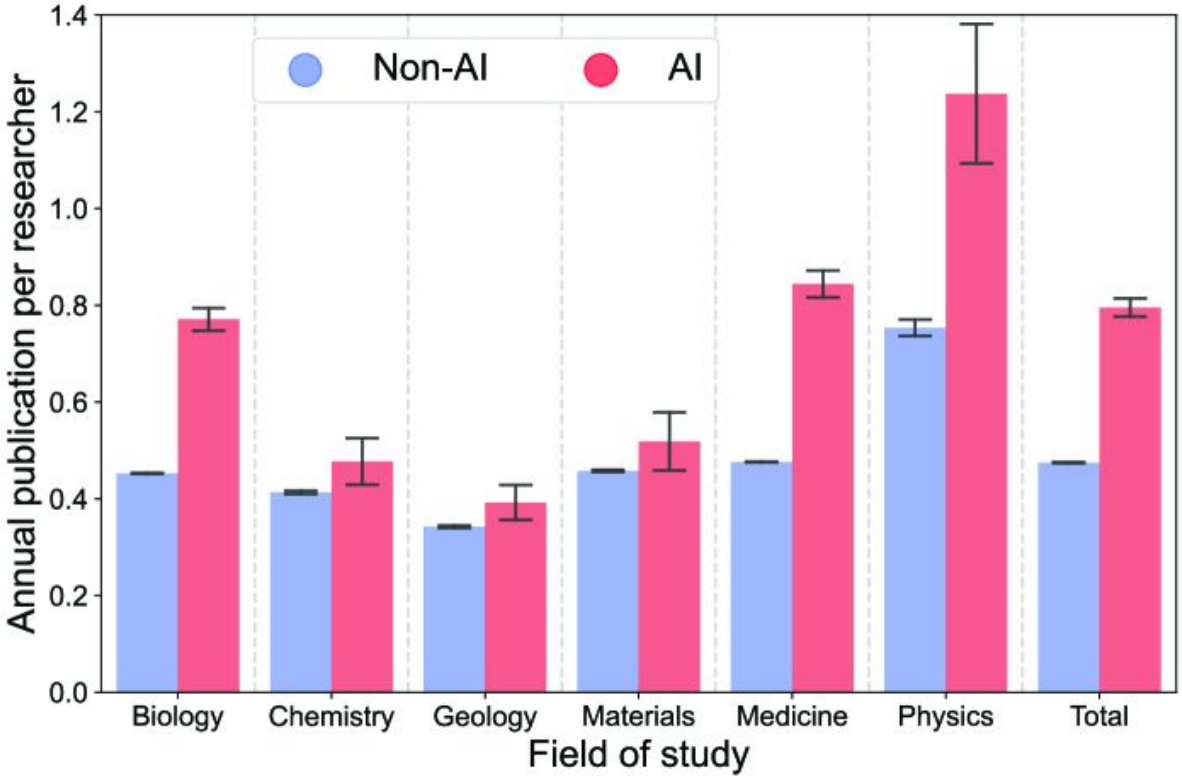


How prepared is your organization to adopt these emerging technologies?



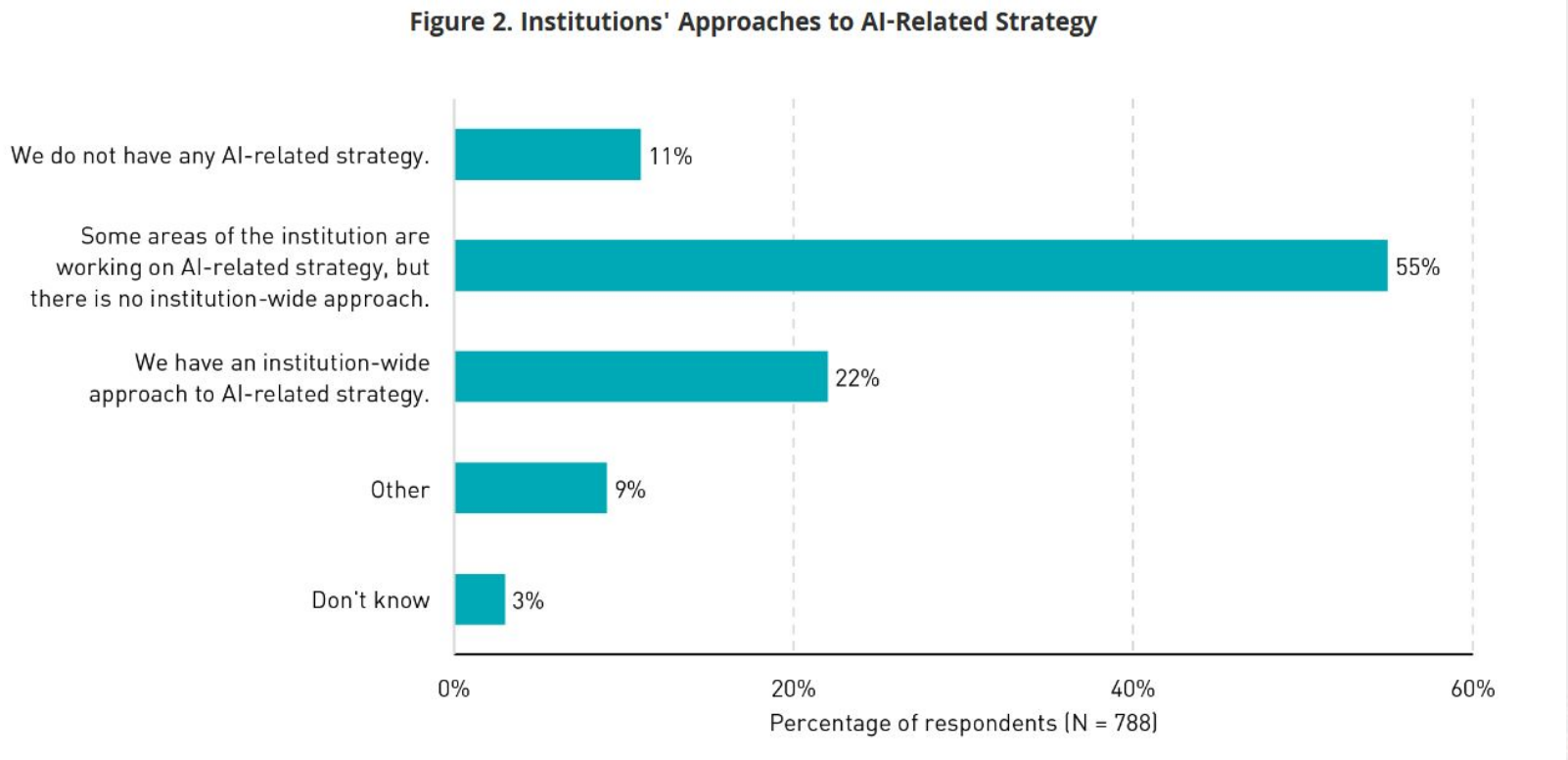
Crane Venture Partners, 2025

AI Lends Advantage to Scientific Researchers



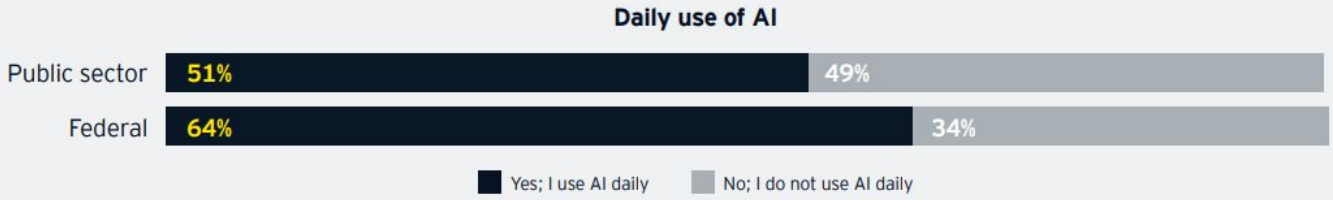
Hao et al 2024

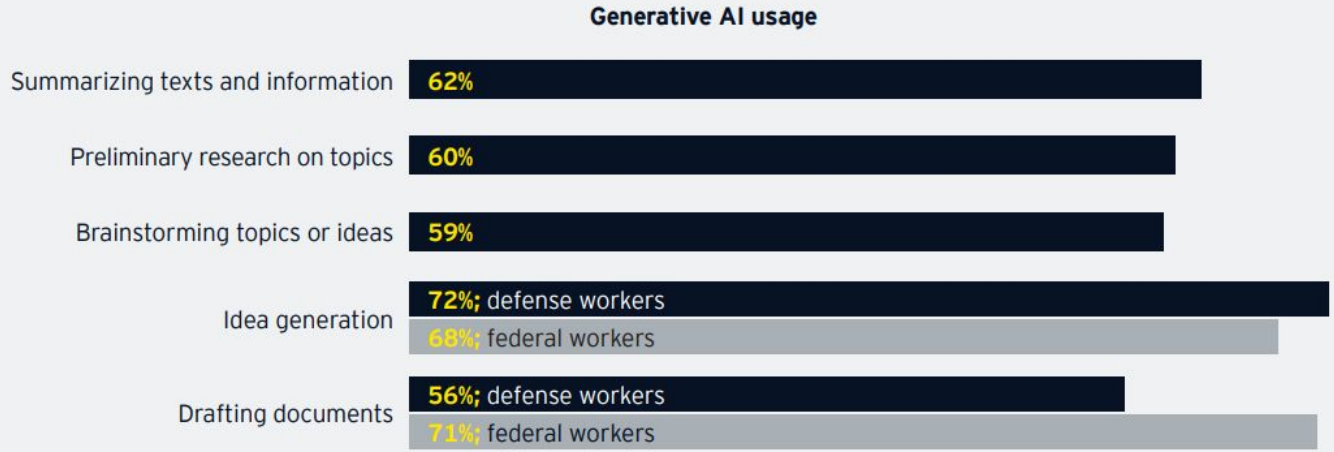
Organizational Preparedness - Higher Ed



EDUCAUSE AI Landscape Study, 2025

AI's Individual Use in Government



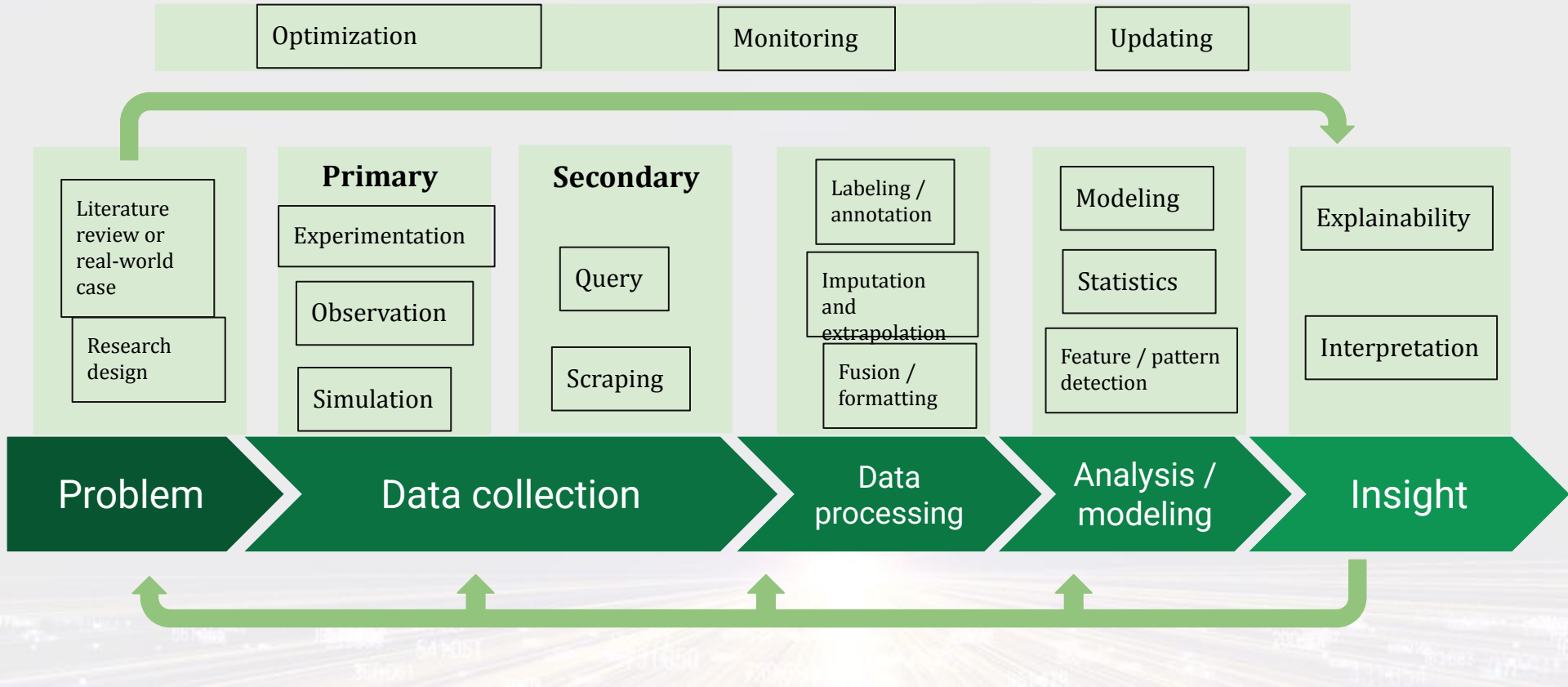


EY Survey 2024

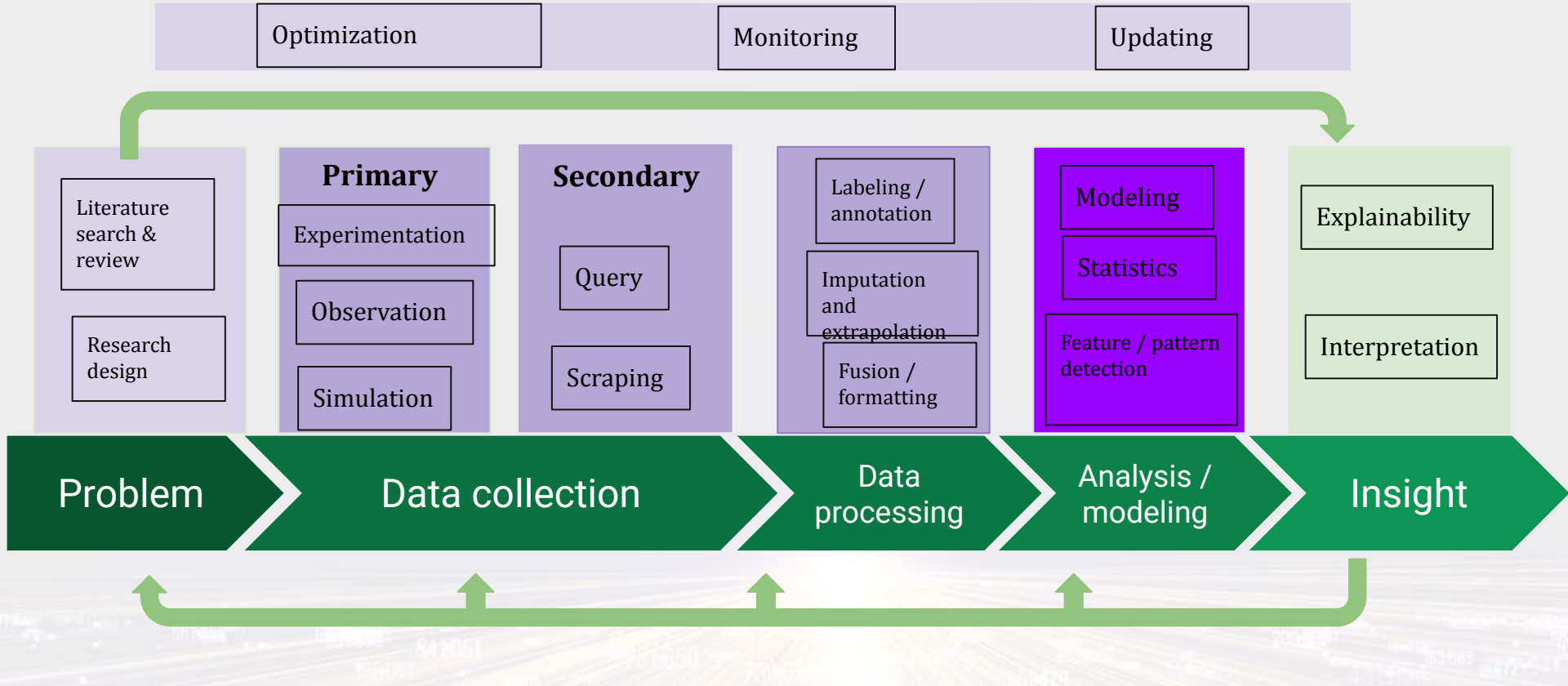
Organizational Considerations

Mission	Where to implement AI Trustworthy output How to apply insight and what we want to achieve
Capacity	Talent Infrastructure: data, compute, models Cost and resources Security and risk management
Culture	Why do we want to implement AI? Change management to keep up with AI advancement Organization and processes The future of work and the value of work

Research Workflow



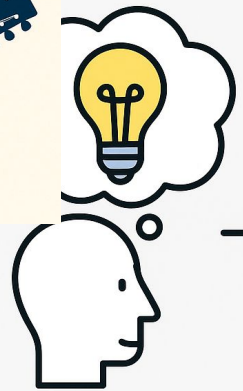
How AI Is "Taking Over"

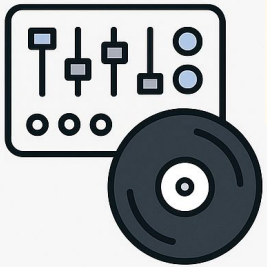


Why We Work


To earn a paycheck
To contribute to society
It's part of our identity
We enjoy it

Why We Work





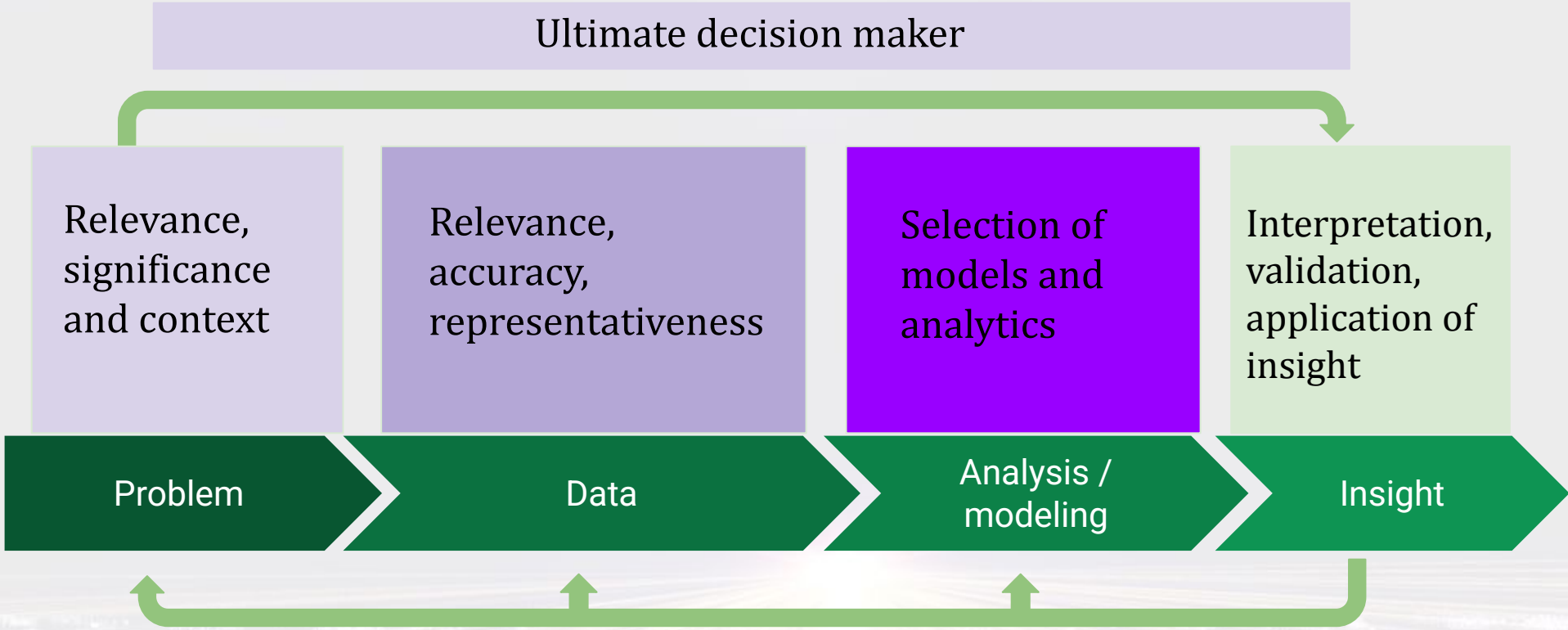
Creative Idea

Music Composition

Music Production

Why We Work

What Humans Should Do



“Growing up Together” in the AI Era

Context and public mission

Societal needs

Public data

Talent

Future innovation

Independent perspective

Technology

Scale

Resource

Case Study - R&D Co-design

Collaborative Design of Data and AI Systems for Science and Society (NSF funding)

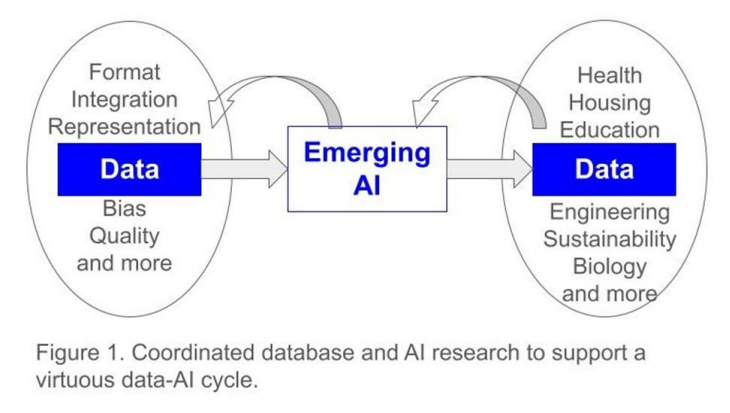


Figure 1. Coordinated database and AI research to support a virtuous data-AI cycle.

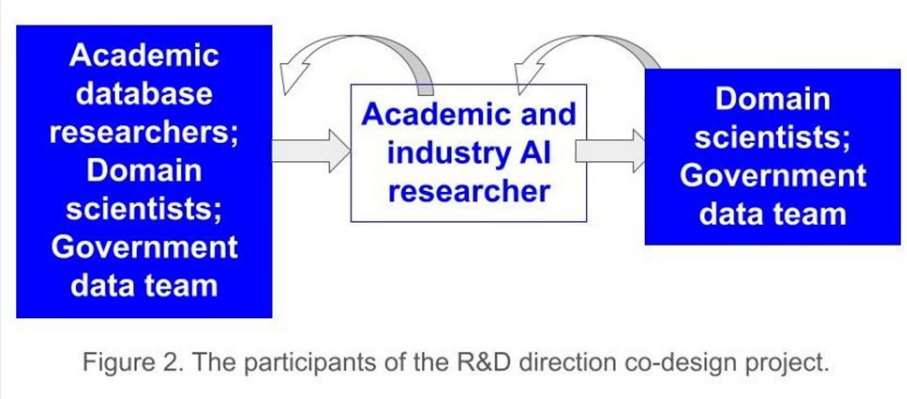


Figure 2. The participants of the R&D direction co-design project.

University of Michigan: database researchers, AI researchers, database developers, database and AI end users across research domains.

Microsoft: database researchers, AI researchers.

Detroit: city government database and AI end users.

Case Study - R&D Co-design

Workshop #1

All participants:

- Get to know each other
- Share previous collaboration experiences
- Identify challenges in collaboration development
- Propose research project ideas

Case Study - R&D Co-design

Workshop #2

All participants:

- Bring in more collaborators / organizations
- Determine the scope and deliverables of three projects
  - Detroit: context and impact
  - U. Michigan: research feasibility, methodology and rigor
  - Microsoft: Rapid implementation

Case Study - R&D Co-design

Workshop #3

Microsoft: Lead a hackathon to develop prototypes for three projects

- Chatbot for better city service
- Computer vision for city planning
- ML for flood risk prediction

Detroit: Lead the effort for data access

All:

- Bring decision-makers from all organizations
- Bring potential funders

Case Study - Responsible AI

Microsoft

Provide: funding
Benefits:
Choose faculty-initiated projects
Know the academic perspective
Know the newest research

U. Mich

Provide:
Coordination
Research expertise
Original and innovative research
Benefits:
Research resources
Know the industry perspective

Four projects in 2024

- Human- AI framework for responsible AI
- Responsible AI for the criminal legal system
- Addressing fairness and bias issues in education AI models
- Human-AI teaming to support online knowledge community

Case Study - Responsible AI

Rocket

Provide: funding
Benefits:
Connection with academic research community
Constant feedback for their work
Know the newest research

U. Mich

Provide:
Coordination
Research expertise
Original and innovative research
Benefits:
Research resources
Know the industry perspective

One postdoctoral fellow

- Freedom to pursue original research on “responsible AI”
- Liberty to publish research
- Attending weekly tech team meetings at Rocket Companies

“Growing Up” Together

Shared stakes call for

- sharing perspectives
- sharing resources
- concerted effort