National Institutes of Health
Office of Data Science Strategy

AI Supplements Closeout Meeting

NIH Office of Data Science Strategy

Oct 24 , 2021

Welcome!!

Showcase your work and share your experiences with other researchers and the NIH

	Oct 24th	Oct 31st	Nov 1st
AI-Workforce: (NOT-OD-21-079) *Workforce Development at the Interface of Information Sciences, AI/ML, and Biomedical Sciences*	☑		☑
AI-Readiness: (NOT-OD-21-094) *Collaborations to Improve the AI/ML-Readiness of NIH-Supported Data*		☑	☑

https://www.scgcorp.com/odssaicloseout2022/

Contacts and Information

- Event website has up to date agenda
  https://www.scgcorp.com/odssaicloseout2022/

- If you have questions about the **program**, please email:
  Mike Spittel Michael.Spittel@nih.gov

- If you have any **technical or logistics issues**, please email:
  Mark Dennis mdennis@scgcorp.com

- Please be sure to visit the ODSS website to read the Tagline and Abstracts submitted by your colleagues.
  https://datascience.nih.gov/artificial-intelligence/initiatives/Workforce-Gap-Data-Governance-AI

- Plenary Sessions will be recorded

Request

Please use the chat freely!!

NIH Observers – please add “NIH” prefix to your name in Zoom

- Right click on your video box, or click “…”
- Choose “Rename”
- “NIH – Laura Biven”

Abbreviated Agenda

10/24/2022

https://www.scgcorp.com/odssaicloseout2022/

11:00 a.m. – 11:10 a.m. **Welcome and Introductions**

11:10 a.m. – 11:40 a.m. **Updates on AI from NIH**

11:45 a.m. – 1:10 p.m. **Parallel Interactive Lightning Talks**

5 minute breaks between sessions

1:20 p.m. – 1:30 p.m. **Instructions for Breakout Discussion**

1:30 p.m. – 2:30 p.m. **Discussion 1 (Breakouts)**

2:35 p.m. – 3:05 p.m. **Readout from Breakouts**

3:05 p.m. – 3:20 p.m. **Open Conversation of Cohort Support and Future Vision**

Abbreviated Agenda

10/24/2022

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11:00 a.m. – 11:10 a.m. Welcome and Introductions

11:10 a.m. – 11:40 a.m. Updates on AI from NIH

11:45 a

5

1:20 p.

1:30 p.

2:35 p.

3:05 p.

Future Vision

** ** **

Use the breaks to stretch, get snacks…

** ** **

Updates on AI from NIH

National AI Initiative

DIVISION E—NATIONAL ARTIFICIAL INTELLIGENCE INITIATIVE ACT OF 2020

SEC. 5001. SHORT TITLE.

This division may be cited as the "National Artificial Intelligence Initiative Act of 2020".

Established a coordinated program across the entire Federal government to accelerate AI research and application for the Nation's economic prosperity and national security.

https://www.ai.gov/

AI in the USG

NATIONAL ARTIFICIAL INTELLIGENCE INITIATIVE OFFICE

Oversees interagency coordination of the NAII

https://www.ai.gov/

SCAI – SELECT COMMITTEE ON AI

The senior interagency committee that oversees the NAII

AI R&D IWG – NITRD AI R&D INTERAGENCY WORKING GROUP

Coordinates Federal AI R&D across 32 participating agencies

https://www.nitrd.gov/apps/itdashboard/ai-rd-investments/

Federal Advisory Committee meetings are open to the public

NAIAC – NATIONAL AI ADVISORY COMMITTEE

Provides advice to the President and the National Artificial Intelligence Initiative Office on matters related to the NAII

https://www.ai.gov/naiac/

NAIRRTF – NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH RESOURCE TASK FORCE

Investigates the feasibility of a National Artificial Intelligence Research Resource (NAIRR), and proposes a roadmap detailing how to establish and sustain the NAIRR

https://www.ai.gov/nairrtf/

NAII Strategic Pillars

ADVANCING TRUSTWORTHY AI

EDUCATION AND TRAINING

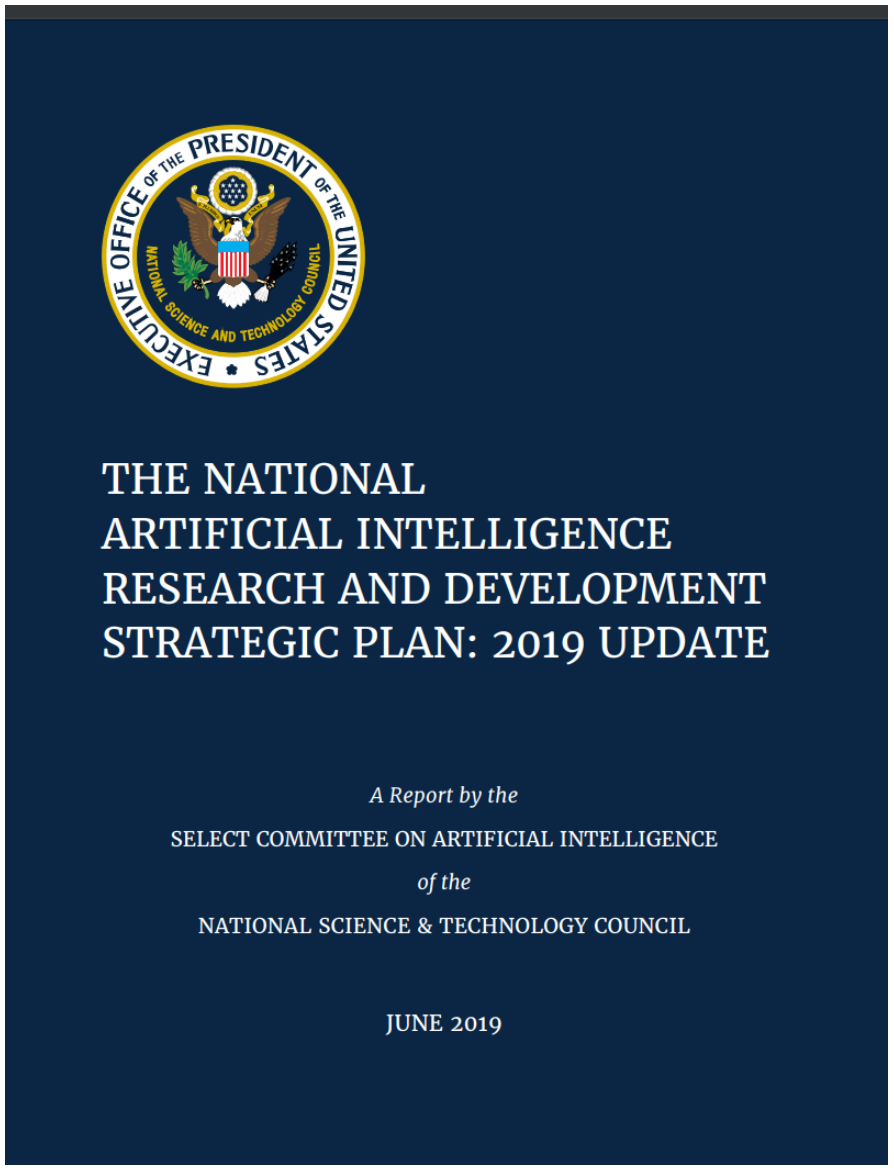
INFRASTRUCTURE

APPLICATIONS

INTERNATIONAL COOPERATION

https://www.ai.gov/strategic-pillars/

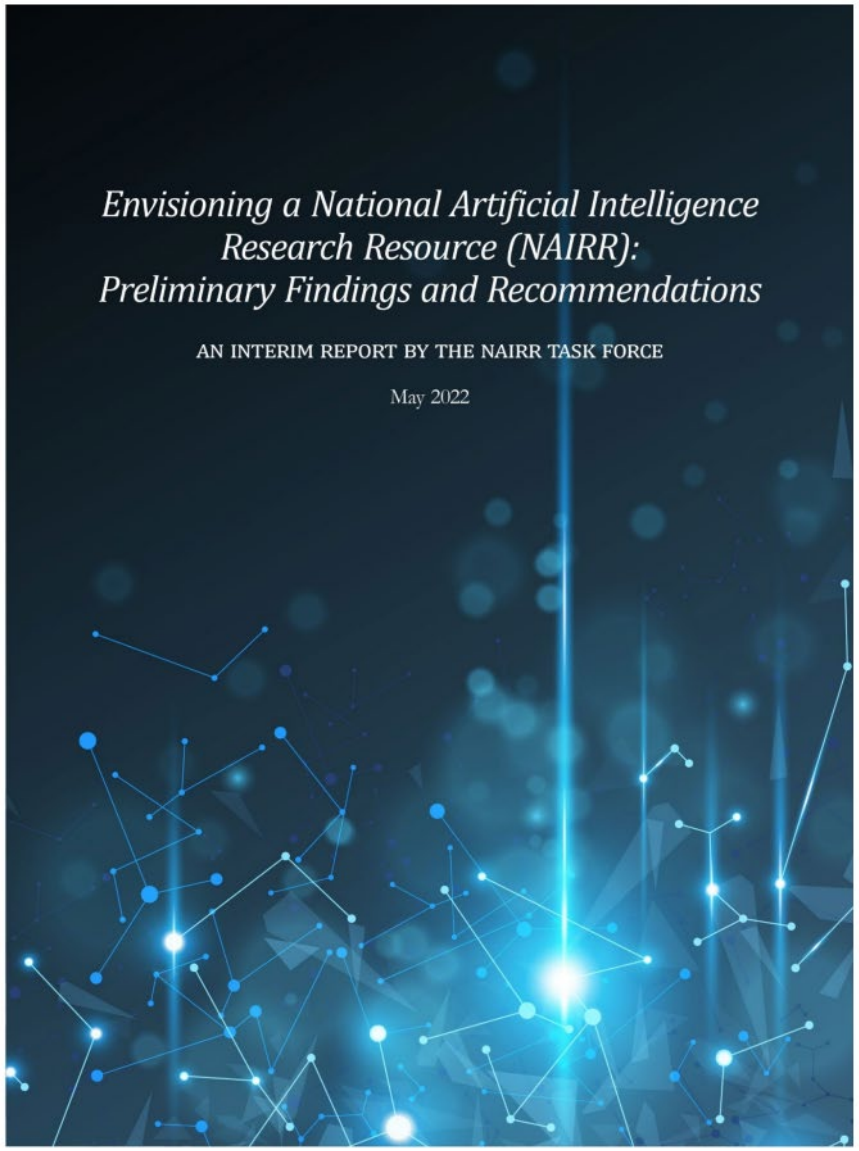
NITRD AI R&D INTERAGENCY WORKING GROUP



- **Strategy 1: Make long-term investments in AI research;**
- **Strategy 2: Develop effective methods for human-AI collaboration;**
- **Strategy 3: Understand and address the ethical, legal, and societal implications of AI;**
- **Strategy 4: Ensure the safety and security of AI systems;**
- **Strategy 5: Develop shared public datasets and environments for AI training and testing;**
- **Strategy 6: Measure and evaluate AI technologies through standards and benchmarks;**
- **Strategy 7: Better understand the national AI R&D workforce needs.**
- **Strategy 8: Expand public-private partnerships to accelerate advances in AI.**

https://www.nitrd.gov/pubs/National-AI-RD-Strategy-2019.pdf

NAIRR



Definition of NAIRR (15 U.S.C. § 9415(g)(1))

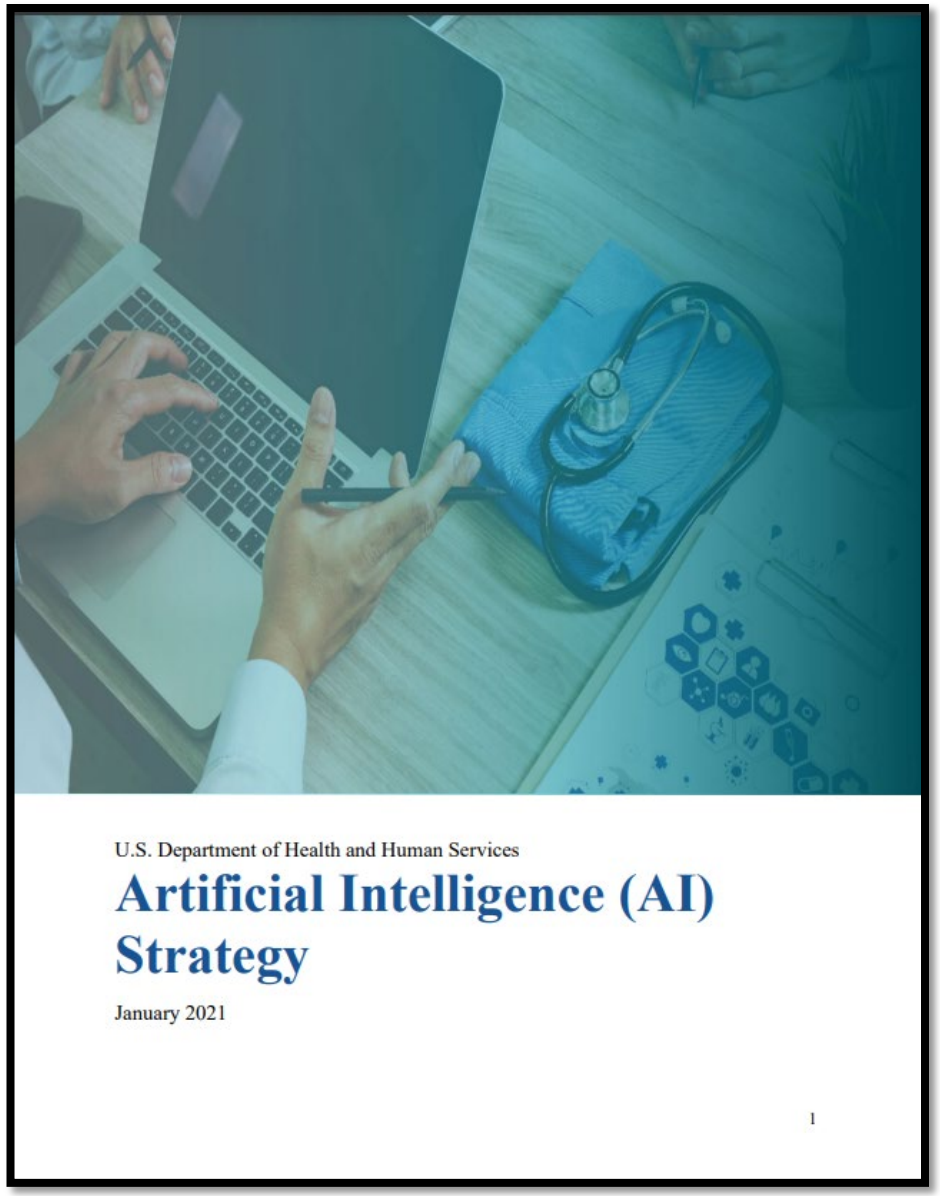
A system that provides researchers and students across scientific fields and disciplines with access to compute resources, co-located with publicly-available, artificial intelligence-ready government and non-government data sets and a research environment with appropriate educational tools and user support

"The strategic objective for establishing a NAIRR is to strengthen and democratize the U.S. AI innovation ecosystem in a way that protects privacy, civil rights, and civil liberties"

https://www.ai.gov/wp-content/uploads/2022/05/NAIRR-TF-Interim-Report-2022.pdf

Final report expected in Dec 2022

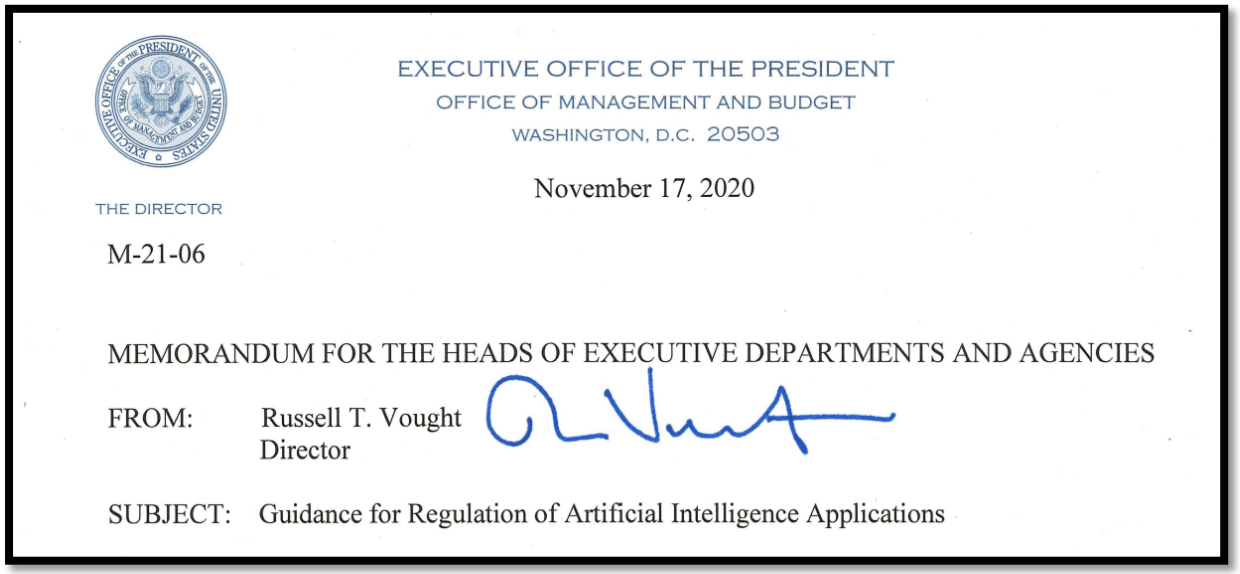
HHS



"Together with its partners in academia, industry and government, HHS will leverage AI to solve previously unsolvable problems by ***continuing to lead advances in the health and wellbeing*** *of the American people,* ***responding to the use of AI*** *across the health and human services ecosystem, and* ***scaling trustworthy AI adoption*** *across the Department."*

https://www.hhs.gov/sites/default/files/hhs-ai-strategy.pdf

M-21-06



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

November 17, 2020

THE DIRECTOR

M-21-06

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Russell T. Vought
Director

SUBJECT: Guidance for Regulation of Artificial Intelligence Applications

https://www.whitehouse.gov/wp-content/uploads/2020/11/M-21-06.pdf

Principles for the Stewardship of AI Applications

1) Public Trust in AI
2) Public Participation
3) Scientific Integrity and Information Quality
4) Risk Assessment and Management
5) Benefits and Costs
6) Flexibility
7) Fairness and Non-Discrimination
8) Disclosure and Transparency
9) Safety and Security
10) Interagency Coordination

Executive Order 13960


NATIONAL ARCHIVES

FEDERAL REGISTER

The Daily Journal of the United States Government

Presidential Document

Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government

A Presidential Document by the Executive Office of the P

12/08/2020

1. Lawful and respectful of our Nation's values.
2. Purposeful and performance-driven.
3. Accurate, reliable, and effective.
4. Safe, secure, and resilient.
5. Understandable.
6. Responsible and traceable.
7. Regularly monitored.
8. Transparent.
9. Accountable.

https://www.federalregister.gov/documents /2020/12/08/2020-27065/promoting-the-use-of-trustworthy-artificial-intelligence-in-the-federal-government

HHS

Trustworthy AI (TAI) Playbook

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

SEPTEMBER 2021

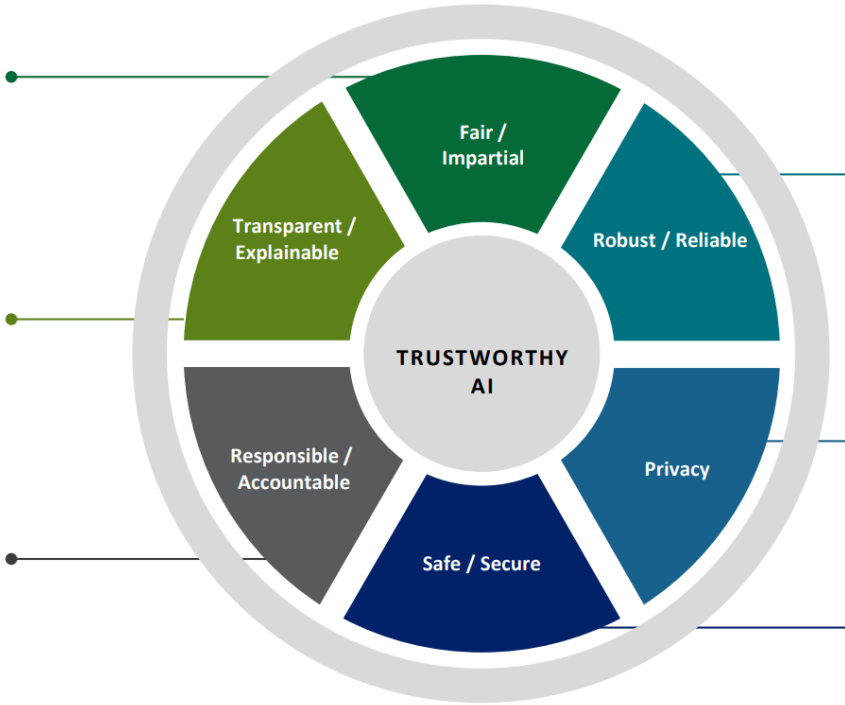
Overview of TAI Principles [12]

By applying these six TAI principles across all phases of an AI project, OpDivs and StaffDivs can promote ethical AI and achieve the full operational and strategic benefits of AI solutions.

Fair / Impartial
AI applications should include checks from internal and external stakeholders to help ensure equitable application across all participants

Transparent / Explainable
All relevant individuals should understand how their data is being used and how AI systems make decisions; algorithms, attributes, and correlations should be open to inspection

Responsible / Accountable
Policies should outline governance and who is held responsible for all aspects of the AI solution (e.g., initiation, development, outputs, decommissioning)



Robust / Reliable
AI systems should have the ability to learn from humans and other systems and produce accurate and reliable outputs consistent with the original design

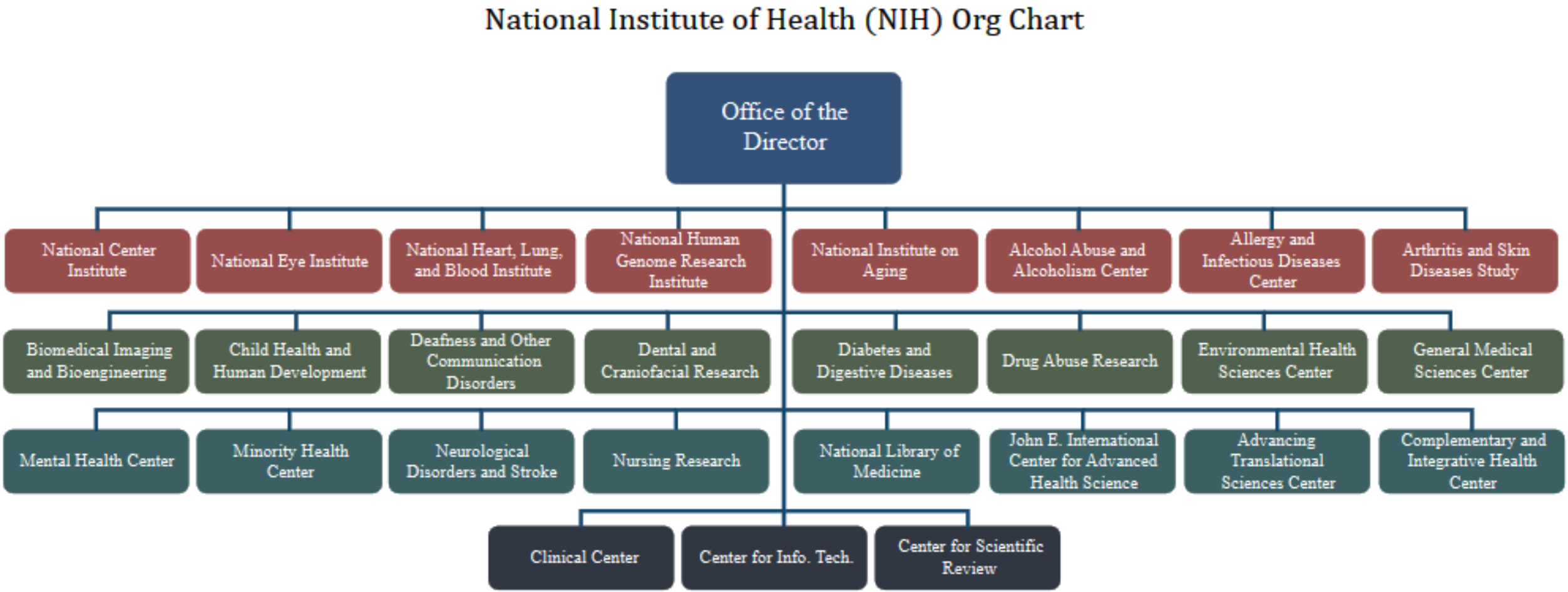
Privacy
Individual, group, or entity privacy should be respected, and their data should not be used beyond its intended and stated use; data used has been approved by the data owner or steward

Safe / Secure
AI systems should be protected from risks (including Cyber) that may directly or indirectly cause physical and/or digital harm to any individual, group, or entity

TAI principles are not mutually exclusive, and tradeoffs often exist when applying them.

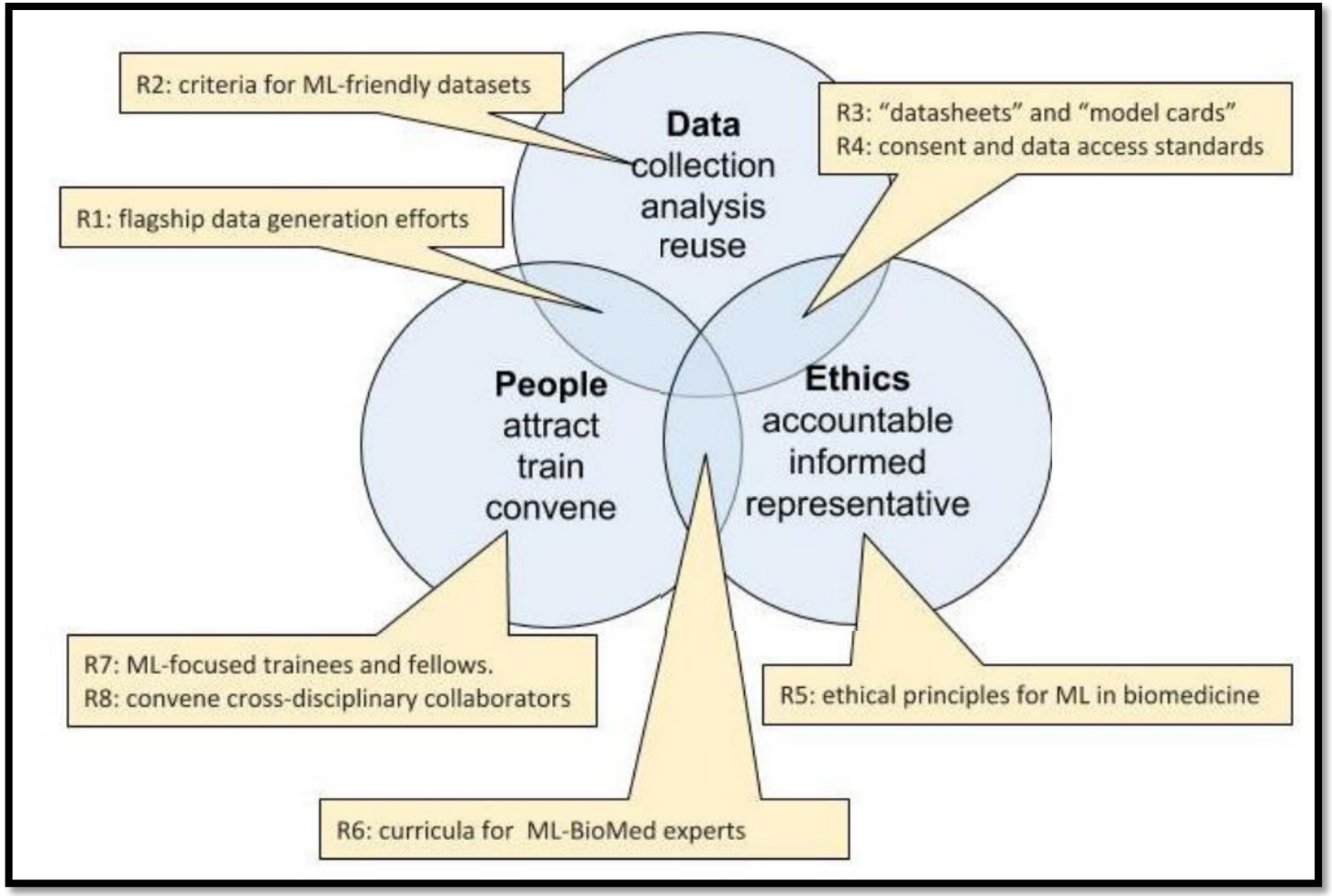
https://www.hhs.gov/sites/default/files/hhs-trustworthy-ai-playbook.pdf

National Institutes of Health Institutes, Centers, and Offices



Biomedical AI: Visions for an **ETHICAL** Future

NIH ACD AI Working Group Recommendations:

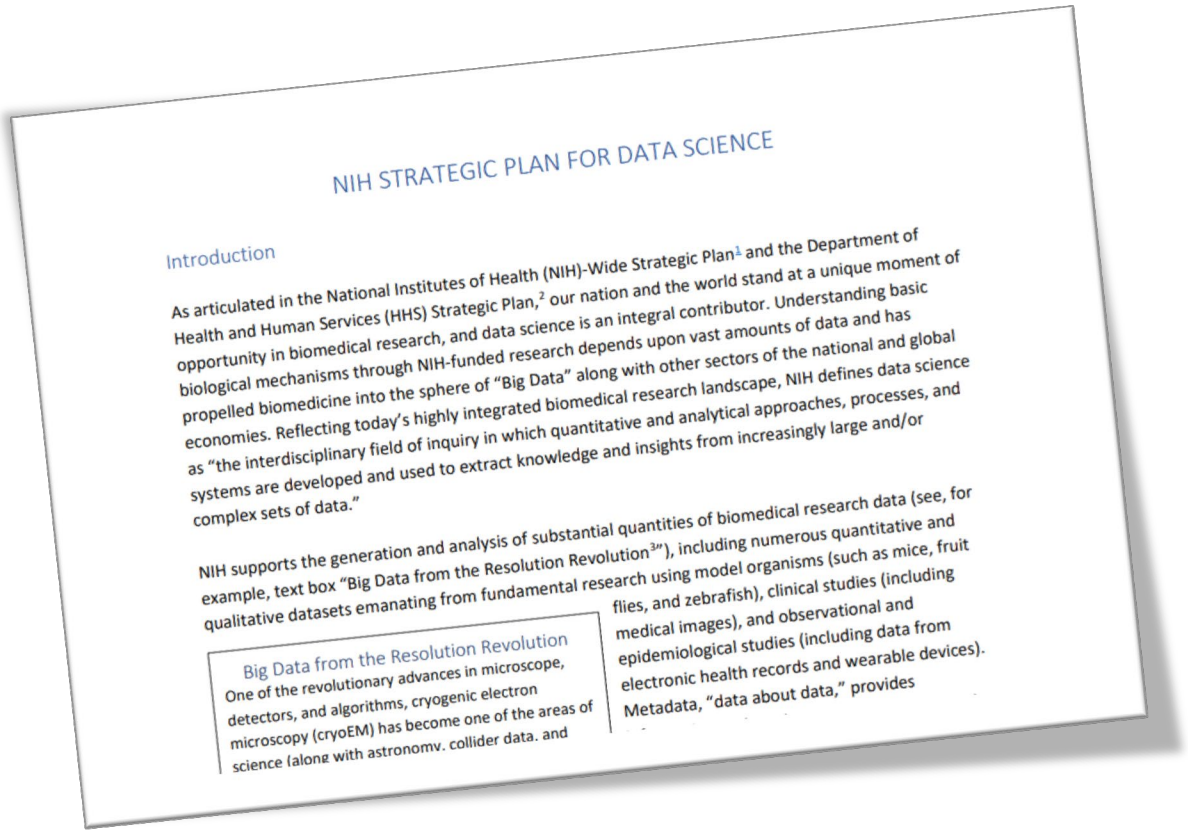


- Outlined opportunities to fuse AI/ML with exponential increase in biomedical data
- Ethics was identified as equally important to Data and People, reflecting the primary importance of infusing ethical thinking into AI/ML use in biomedical research

https://www.acd.od.nih.gov/documents/presentations/12132019AI_FinalReport.pdf

NIH Strategic Plan for Data Science

VISION:
A modernized, integrated, FAIR, biomedical data ecosystem



NIH STRATEGIC PLAN FOR DATA SCIENCE

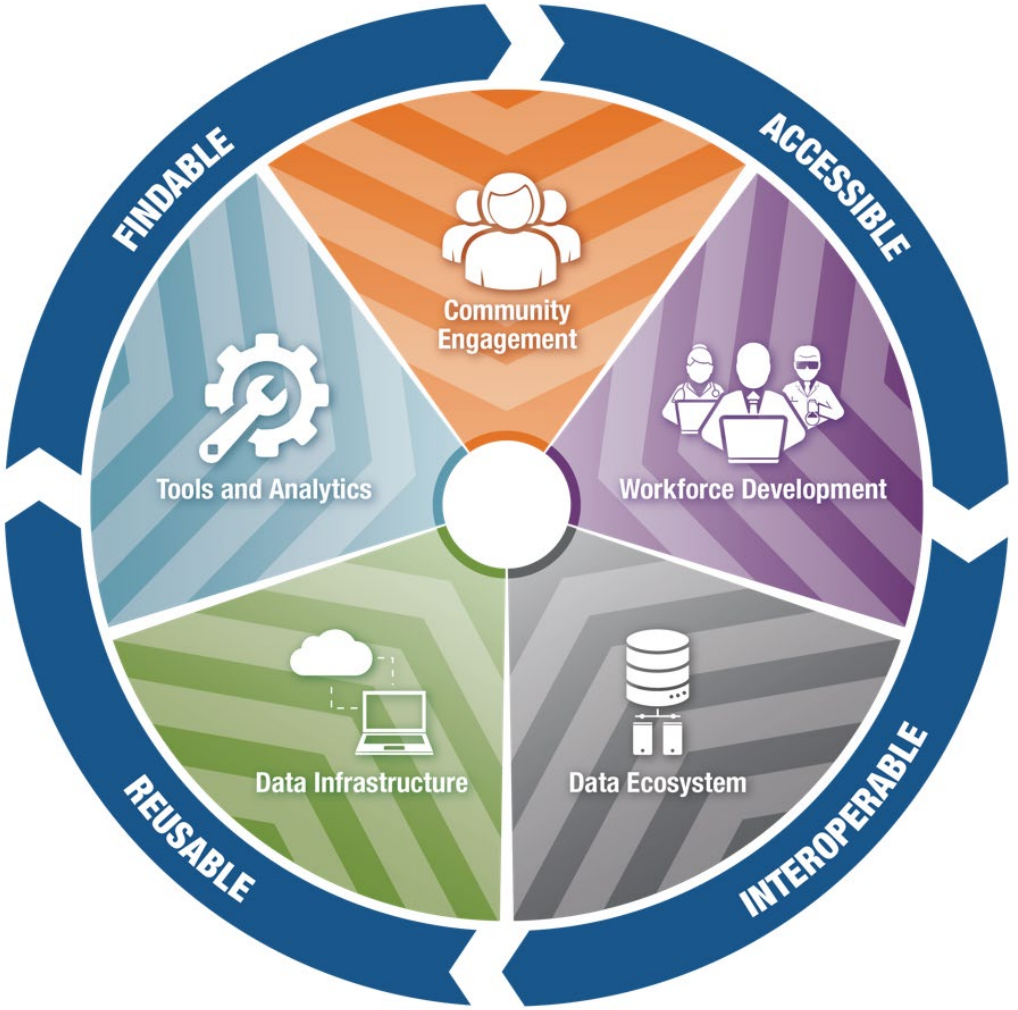
Introduction

As articulated in the National Institutes of Health (NIH)-Wide Strategic Plan[1] and the Department of Health and Human Services (HHS) Strategic Plan,[2] our nation and the world stand at a unique moment of opportunity in biomedical research, and data science is an integral contributor. Understanding basic biological mechanisms through NIH-funded research depends upon vast amounts of data and has propelled biomedicine into the sphere of "Big Data" along with other sectors of the national and global economies. Reflecting today's highly integrated biomedical research landscape, NIH defines data science as "the interdisciplinary field of inquiry in which quantitative and analytical approaches, processes, and systems are developed and used to extract knowledge and insights from increasingly large and/or complex sets of data."

NIH supports the generation and analysis of substantial quantities of biomedical research data (see, for example, text box "Big Data from the Resolution Revolution[3]"), including numerous quantitative and qualitative datasets emanating from fundamental research using model organisms (such as mice, fruit flies, and zebrafish), clinical studies (including medical images), and observational and epidemiological studies (including data from electronic health records and wearable devices). Metadata, "data about data," provides

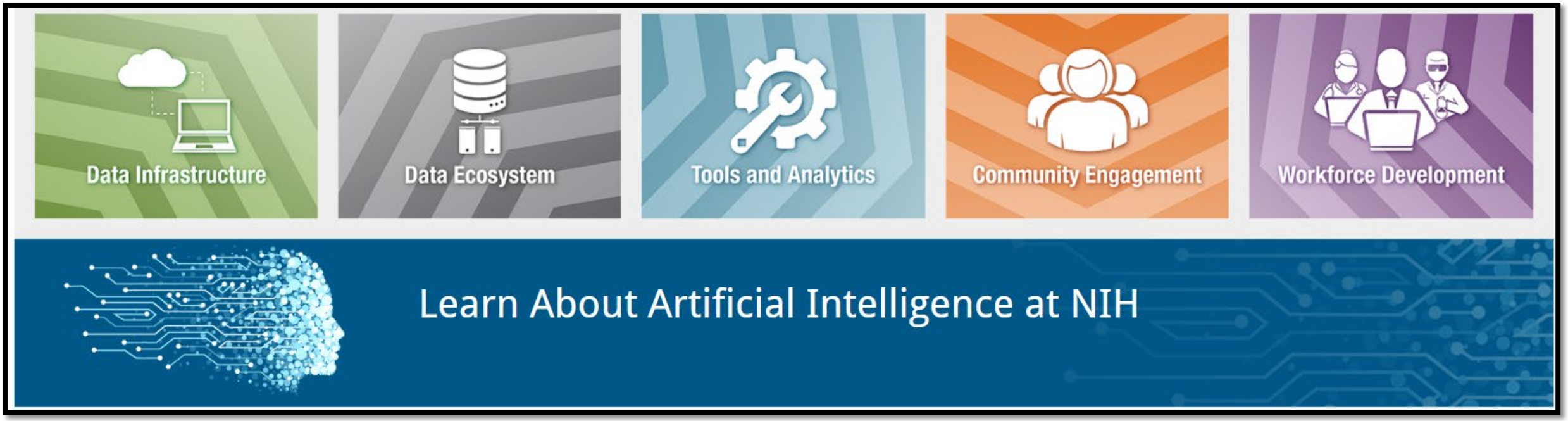
Big Data from the Resolution Revolution

One of the revolutionary advances in microscope, detectors, and algorithms, cryogenic electron microscopy (cryoEM) has become one of the areas of science (along with astronomy, collider data, and



https://datascience.nih.gov/

AI



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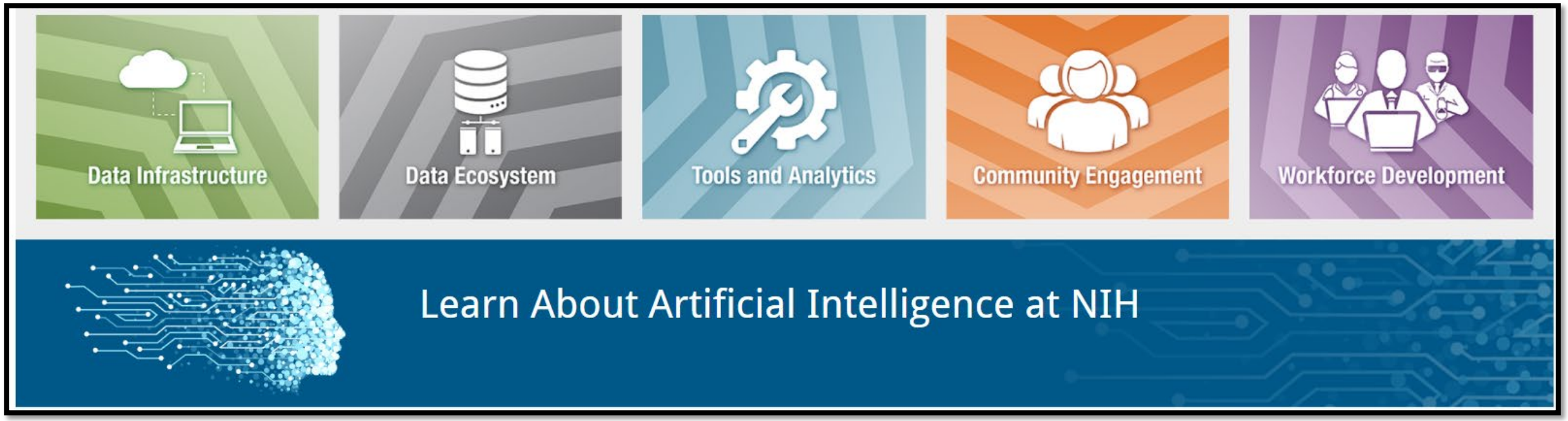
AI



AIM AHEAD

Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity (AIM-AHEAD)

https://datascience.nih.gov/artificial-intelligence/aim-ahead

BRIDGE2AI

Bridge to Artificial Intelligence (Bridge2AI)

https://www.commonfund.nih.gov/bridge2ai

https://datascience.nih.gov/

Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity (AIM-AHEAD)

- Partnerships
- Research
- Infrastructure
- Training

Goals:

- to enhance the **participation** and **representation** of researchers and communities currently underrepresented in the development of artificial intelligence and machine learning (AI/ML) models
- to address health disparities and inequities using AI/ML
- to improve the capabilities of this emerging technology, beginning with the use of electronic health record (EHR) and extending to other diverse data

https://aim-ahead.net/
https://datascience.nih.gov/artificial-intelligence/aim-ahead

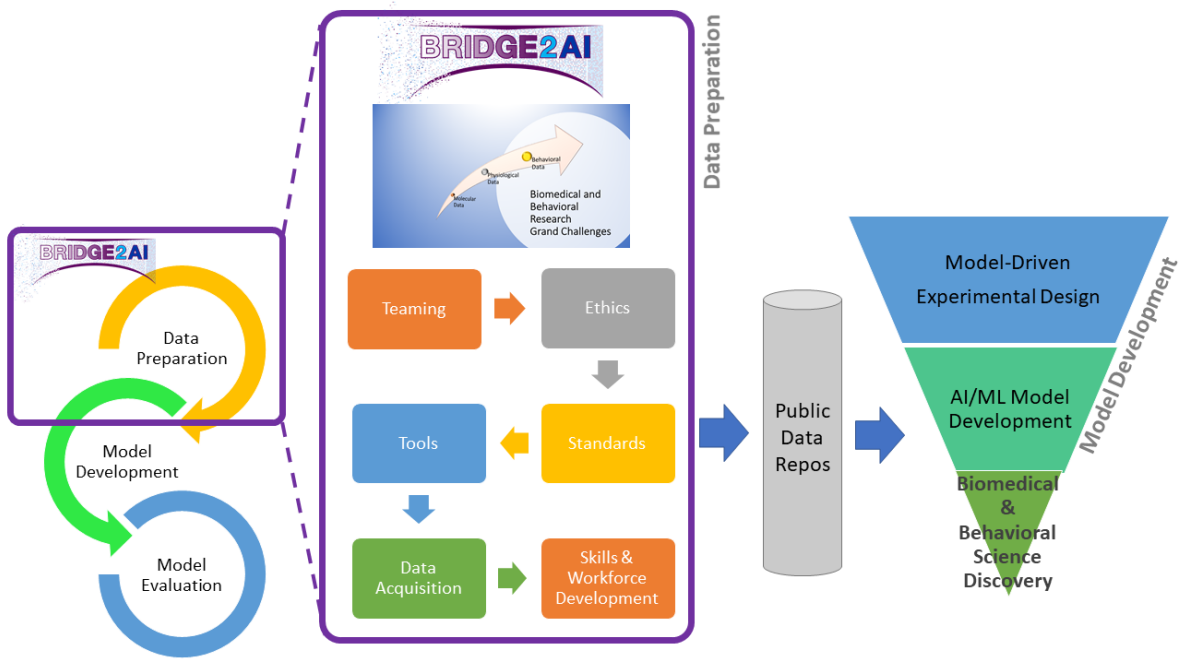
AIM-AHEAD Accomplishments

- 22 Research Fellowships awarded in 2022, engaging early-career researchers from under-represented populations in biomedical research that involves the use of AI/ML methodologies on Electronic Health Record Data.
- 25 Leadership Fellowships awarded in 2022, preparing a diverse leaders to champion the use of AI/ML in addressing persistent health disparities
- 22 **Pilot research projects** awarded in 2022, to test new paradigms of research, data analysis, and the new ways for underrepresented groups to derive value from their own health data.
- AIM-AHEAD connect platform launched as virtual hub for research at the intersection of AI/ML and health equity.
- Numerous webinars and symposia, including AI for Health Equity (AIEHS 2022)

Bridge to AI

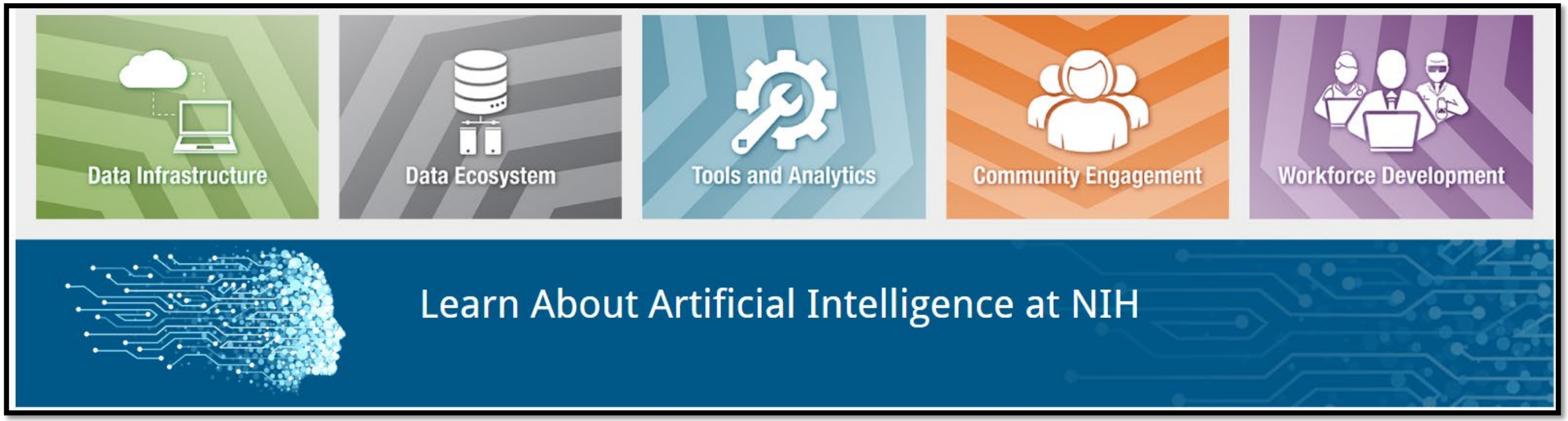
Bridge2AI program will :

- Generate **new flagship biomedical and behavioral data sets** that are ethically sourced, trustworthy, well-defined, and accessible
- Develop software and standards to unify data attributes across multiple data sources and across data types
- Create automated tools to accelerate the creation of FAIR (Findable, Accessible, Interoperable, and Reusable) and ethically sourced data sets
- Provide resources to disseminate data, ethical principles, tools, and best practices
- Create training materials and activities for workforce development that bridges the AI, biomedical, and behavioral research communities



https://commonfund.nih.gov/bridge2ai

AI



Addressing the Workforce Gap in Data Governance for AI in Biomedicine

New investigators trained at the interface of information, AI, and biomedical sciences, ready to advance the field of data science for AI in biomedicine.

Ethics, Bias, and Transparency for People and Machines

Social and technical solutions for embedding ethics across the lifecycle of AI applications.

Improving the AI-readiness of Existing, IC-supported Data

Enhancing NIH data to be FAIR and AI-ready.

https://datascience.nih.gov/artificial-intelligence/initiatives

Training the Workforce to Make Data FAIR and AI/ML-Ready

Support Workforce Development at the Interface of Information Sciences, Artificial Intelligence and Machine Learning (AI/ML), and Biomedical Sciences (NOT-OD-21-079)

ODSS supported the development and implementation of curricular or training activities at the interface of information science, AI/ML, and biomedical sciences to develop the competencies and skills needed to make biomedical data FAIR and AI/ML-ready.

FY21: 23 Awards

- 5 IDeA States
- 4 Minority Serving Institutions
- 11 propose training on ethics of AI
- 8 with a diversity focus

Most common biomedical focus areas: cancer, environmental health, ophthalmology

NCATS | NCI | NEI | NHGRI | NHLBI | NIA | NIAID | NIBIB | NIDDK | NIGMS | NIMH | NIMHD | NINDS

Collaborations to Make Data FAIR and AI/ML Ready

NIH supported collaboration, bringing together expertise in biomedicine, data management, and artificial intelligence and machine learning (AI/ML) to make NIH-supported data AI-ready for AI/ML analytics.

FY21-FY22: 73 Awards

Most common biomedical focus areas:

Alzheimer's and Parkinson's disease, cardiovascular disease, cancer, and aging

Most common data types:

imaging, EHRs, -omics, microbes/pathogens, speech

NHGRI | NIA | NIBIB | NIDA | NIDCD | NIDCR | NIEHS | NIGMS | NIMH | NINDS | NCI | NLM | NIMHD | NIDDK | NICHD | NIAID | NIAMS | NHLBI

Advancing the Ethical Development and Use of AI/ML

New Activity in 2022: Advance the understanding, tools, metrics, and practices for the ethical development and use of AI/ML in biomedical and behavioral sciences. (NOT-OD-22-065)

ODSS supported the generation of **new understanding, practices, tools, techniques, metrics, or resources that will aid *others*** in making ethical decisions throughout the development and use of AI/ML, which includes the collection and generation of data as well as the reuse of data and models by others.

23 Awards:

Most common focus areas: bias, community engagement, trust, explainability, equity.

NCI | NEI | NHLBI | NIA | NIAID | NIAMS | NIDA | NIEHS | NIGMS

National Institutes of Health
Office of Data Science Strategy

Collaboratively Envisioning AI and Ethics in Biomedical Research

NIH hosted Microlabs and Innovation Lab

2022

Collaboratively Envisioning AI and Ethics in Biomedical Research

The NIH is interested in bringing together a diverse cross-section of scientists, social scientists, ethicists, advocates, legal scholars, communicators, and artists interested in the social implications of technology to

- **Forge new collaborations among these cross-disciplinary groups**
- **Identify important areas of consideration at the intersection of artificial intelligence (AI) and machine learning (ML), biomedicine, and ethics.**
- **Generate creative strategies to solve ethical dilemmas in biomedical AI/ML**

Collaboratively Envisioning AI and Ethics in Biomedical Research

Micro Lab #1

Dec 15th, 2021, 2-4pm ET

Who are the relevant stakeholders?

Micro Lab #2

Jan 12th, 2022, 2-4pm ET

What are the key opportunities, challenges, and themes?

Micro Lab #3

Jan 26th, 2022, 2-4pm ET

Organizing and understanding opportunity

Innovation Lab

March 14-18th, 10-5pm ET

A Data Ecosystems Approach to Ethical AI for Biomedical and Behavioral Research

ML3: Organizing and understanding opportunity

Activity: Deep dive breakout discussions

Towards a systems approach to ethics for the AI data ecosystem*	Robust assessment and control of AI products	Unifying the qualitative and quantitative for a more complete understanding of AI	Appropriately accounting for known determinants of health
Using intent for ethical AI	Learning from the Limits of AI	Creating ethical models when data are limited	Understanding what digital dignity means in the practice of AI
Scaling ethics to multi-stakeholder AI	Risk based approaches for mitigating social harm and enhancing social justice	AI as a tool for ethics research	Training for deep expertise, general competency, or the ability to translate
Ubiquitous AI	Cross walking disciplinary terminology and literacy	Understanding ethical considerations of Human-AI teaming in basic research	

*So popular it was split into two breakouts

InnovationLab: A Data Ecosystems Approach to Ethical AI for Biomedical and Behavioral Research

Developing social and technical approaches to defining and implementing ethics across the AI data ecosystem

**

Creating a culture of ethical inquiry

March 14-18, 2022 from 10:00 AM ET - 5 PM ET.

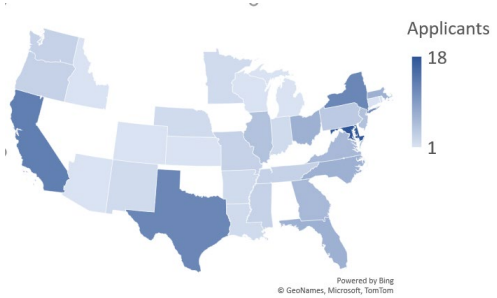
https://apply.hub.ki/aiandethicsinnovationlab/

Diversity of Innovation Lab Applicants and Attendees

Applicants: 170

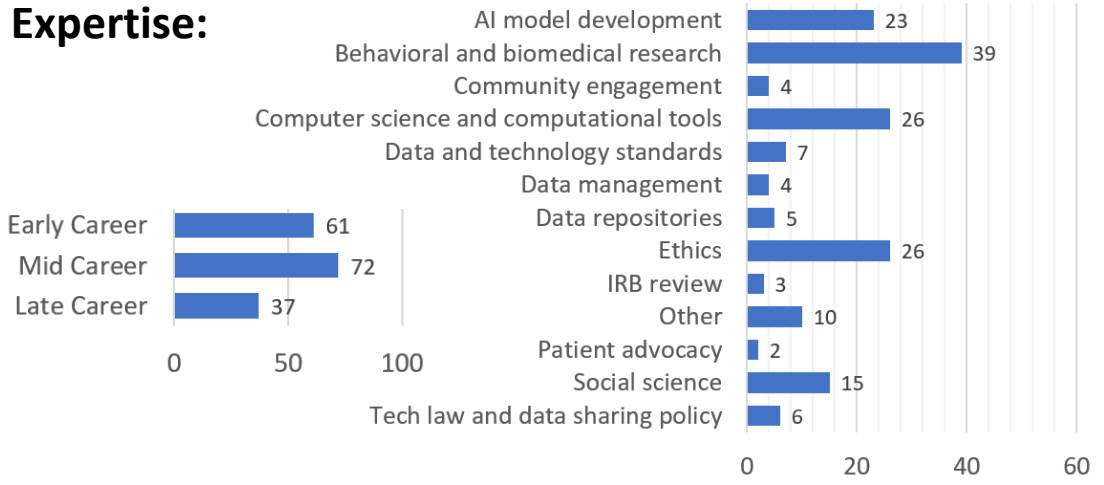
17% from MSIs. **21%** identify as a racial or ethic group underrepresented in biomedical research.

Geographical Representation:



Hawaii - HI	2
Alaska - AK	1
Puerto Rico - PR	3
International (Belgium, Canada, India, Nigeria)	11

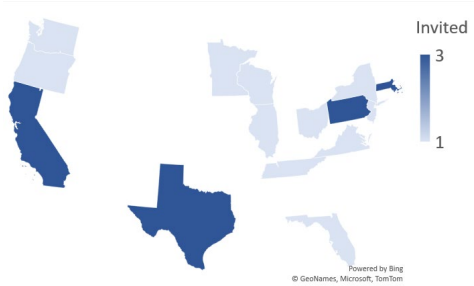
Expertise:



Invited: 31

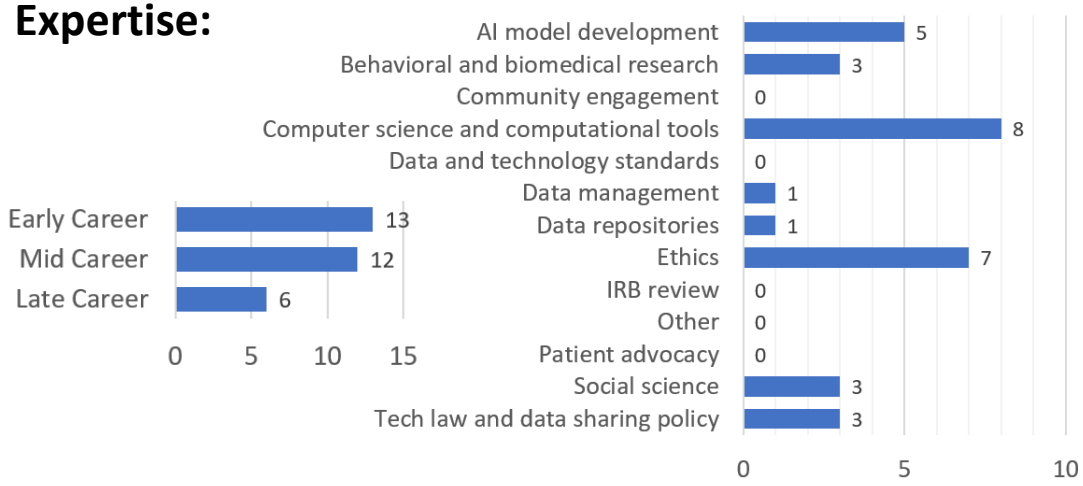
16% from MSIs. **21%** identify as a racial or ethic group underrepresented in biomedical research.

Geographical Representation:



Alaska - AK	1
Puerto Rico - PR	2
International (Belgium, Canada)	3

Expertise:



Innovation Lab Subject Guides

Kristofer Bouchard

PI and Group Lead

Computational Biosciences Group

Lawrence Berkeley National Laboratory

Mildred Cho

Associate Director

Stanford Center for Biomedical Ethics

Stanford University

Beth Plale

Director

Data to Insight Center

University of Indiana

Katie Shilton

Associate Professor and Lead

Ethics & Values in Design (EViD) Lab

University of Maryland

A Data Ecosystems Approach

The social impact of AI depends on the context in which it's used. What types of knowledge are needed to apply AI ethically?

Does the connectivity of the ecosystem create its own ethical challenge?

Physicians create data and metadata for AI. What ethics apply to their role in data science?

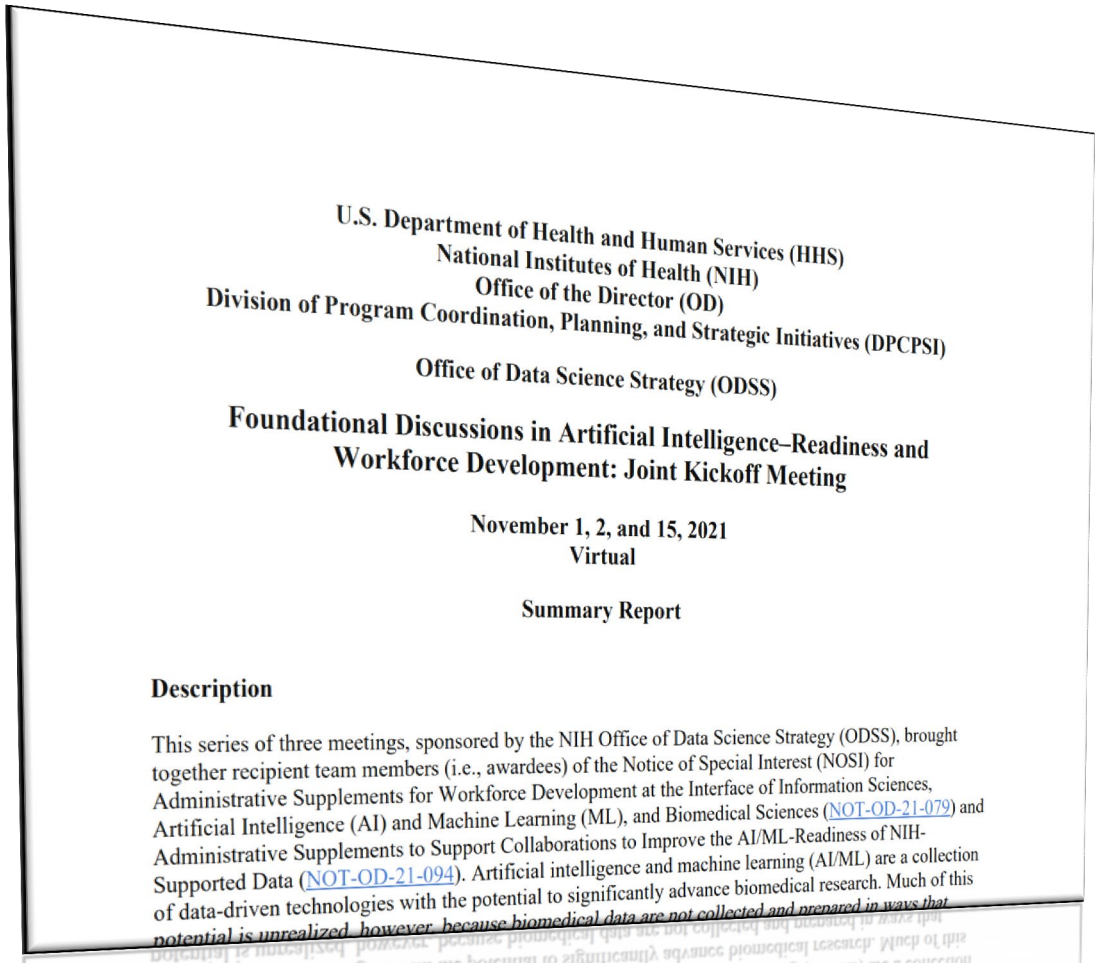
What does beneficence mean for a search engine?
To whom is the developer responsible?

What does beneficence mean for a data repository? What are potential harms?

Innovation Lab: Key Emergent Themes

- The need for and challenges associated with drafting an NIH framework for ethical AI/ML in biomedical/behavioral research.
- The need for and challenges of gathering and honoring input from community groups contributing to or affected by biomedical/behavioral research.
- The value of risk management and mitigation approaches for addressing ethical challenges.
- The need for novel governance structures to define and uphold ethical principles across the data ecosystem.
- The value of social research, namely ethnographic methods, to discover, uncover, and define the AI-data ecosystem supporting biomedical/behavioral research through studies of the behaviors of the participants in this ecosystem. These studies have the potential to integrate feedback from a currently siloed field of experts.

Summary of the Kickoff Meeting



U.S. Department of Health and Human Services (HHS)
National Institutes of Health (NIH)
Office of the Director (OD)
Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI)

Office of Data Science Strategy (ODSS)

Foundational Discussions in Artificial Intelligence–Readiness and Workforce Development: Joint Kickoff Meeting

November 1, 2, and 15, 2021
Virtual

Summary Report

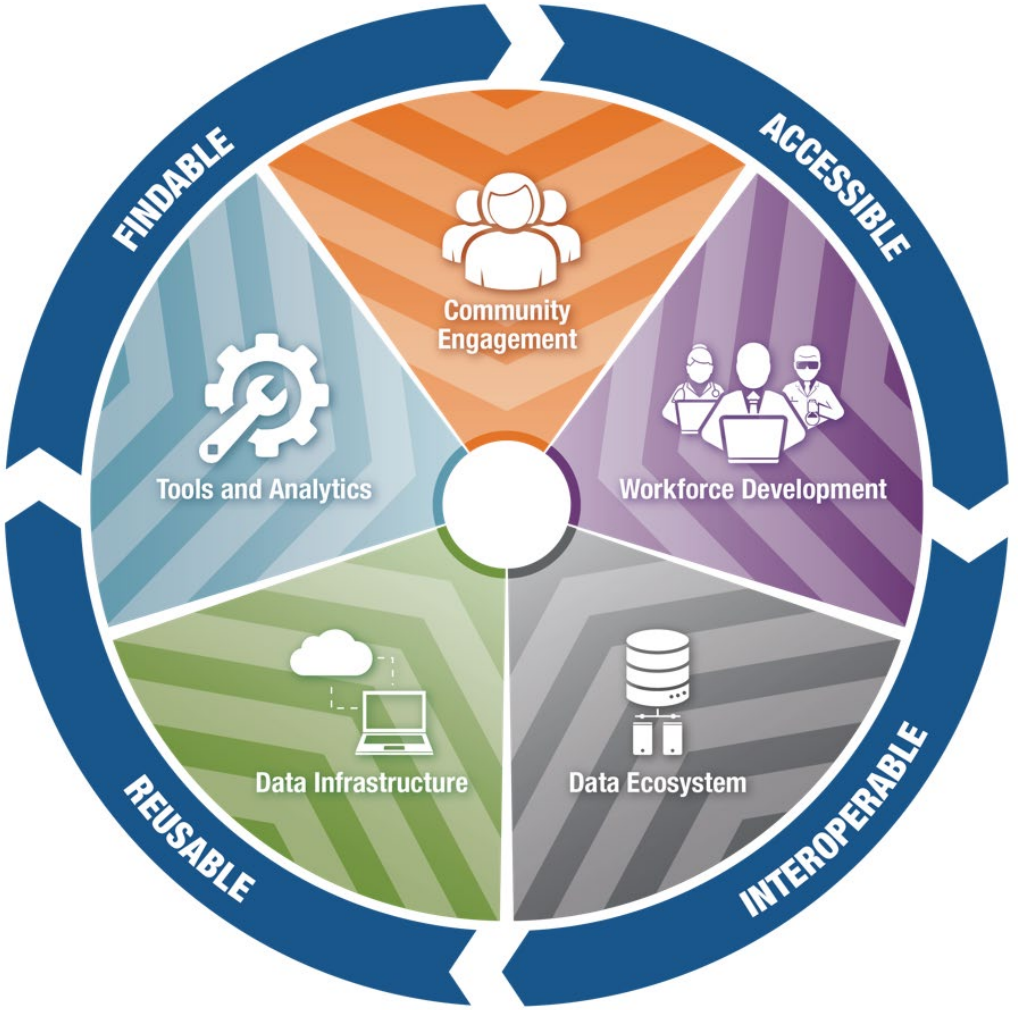
Description

This series of three meetings, sponsored by the NIH Office of Data Science Strategy (ODSS), brought together recipient team members (i.e., awardees) of the Notice of Special Interest (NOSI) for Administrative Supplements for Workforce Development at the Interface of Information Sciences, Artificial Intelligence (AI) and Machine Learning (ML), and Biomedical Sciences (NOT-OD-21-079) and Administrative Supplements to Support Collaborations to Improve the AI/ML-Readiness of NIH-Supported Data (NOT-OD-21-094). Artificial intelligence and machine learning (AI/ML) are a collection of data-driven technologies with the potential to significantly advance biomedical research. Much of this potential is unrealized, however, because biomedical data are not collected and prepared in ways that

Thank you for your input.
We are listening!

https://datascience.nih.gov/sites/default/files/ODSS-FY21-AI-Readiness-Workforce-Dev-NOSI-November-2021-Executive-Summary-508.pdf

Thank you



https://datascience.nih.gov/

Introduction to Lightning Talks

11:40 a.m. – 11:45 a.m. Introduction to Lightning Talks

- What are Interactive Lightning Talks?
- You will be assigned to a parallel session at random
- Instructions for speakers:
  - Please share and drive your own slides
  - There is a 5 min break between sessions

11:45 a.m. – 11:55 a.m. – Session A

- Room 1
  - Project: FAIR and Practical Data Science Training at the Chemistry–Biology Interface
  - Catherine Grimes, PI
- Room 2
  - Project: Adding a FAIR Data Practices Curriculum to UF's Practicum AI AI/ML Training Workshops
  - Julian David, PI
- Room 3
  - Project: Learner-Centered Training in Biological Data Science
  - Sohini Ramachandran, PI

12:00 p.m. – 12:10 p.m. – Session B

- Room 1
  - Project: Stackable Trainings in the FAIRification and AI/ML-Readiness of Data with Applications to Environmental Health and Justice
  - Phil Brown, PI
- Room 2
  - Project: AI Training Module for Vision Science
  - Kate Keller, PI
- Room 3
  - Project: Predoctoral Training in Biological Data Management for Advanced Computational Analysis and the Ethical Usage of Biological Data
  - Thomas Tullius, PI

12:15 p.m. – 12:25 p.m. – Session C

- Room 1
  - Project: Maximizing Student Development in Data- and Information Science-Related Disciplines for Biomedical Ph.D. Trainees at Texas A&M University and Beyond
  - Karen Butler-Purry, PI
- Room 2
  - Project: Workforce Training for Making Data FAIR and Compatible with Machine Learning and Artificial Intelligence Applications
  - Marcus Craig, PI
- Room 3
  - Project: Development of Data Science Course and Summer Bootcamp for Alzheimer's Disease and Related Dementia Researchers
  - Chunyu Wang, PI

12:30 p.m. – 12:40 p.m. – Session D

- Room 1
  - Project: Cancer Research Workforce Development in FAIR Artificial Intelligence and Machine Learning
  - William Cress, PI
- Room 2
  - Project: Making Data FAIR and AI/ML Applications for Cancer Prevention and Control (AI/ML-CAPAC) Research Among Hispanics
  - Ana Patricia Ortiz, PI
- Room 3
  - Project: Demystifying Machine Learning and Best Data Practices Workshop Series for Underrepresented STEM Undergraduate and M.S. Researchers Bound for Ph.D. Training Programs
  - Raymond Esquerra, PI

12:45 p.m. – 12:55 p.m. – Session E

- Room 1
  - Project: Making Environmental Health Data FAIR and AI/ML-Ready
  - Gary Miller, PI

1:00 p.m. – 1:10 p.m. – Session F

- Room 1
  - Project: Next Generation Sequencing and Biological Imaging in the era of Machine Learning
  - Karen Guillemin, PI

BREAK

1:10 p.m. – 1:20 p.m.

Instruction for Breakout Discussions

Breakout Discussion Instructions

- **You have a total of 60 mins – until 2:30pm ET**
- **Take just a few minutes for brief, "one-breath" introductions.**
- **Designate one member of the group to give a ~5 min read out of key themes from this discussion in the next session**
- **Capture your thoughts in the google doc as much as possible. This document will stay open and can be referenced during the read-out**

Breakout Discussion Instructions

- https://docs.google.com/document/d/1vKq9wGkECXGiKvTUR5SNj6F8KaSNLbxq2bW0Cmb74WM/edit
- **When you get to your breakout room, open the google doc that matches your breakout room number**

Discussion Questions

- Considering your own project, and the projects you learned about in the lightning talks: What are some of the successes or highlights?
- Considering your own project, and the projects you learned about in the lightning talks: What are some of the important gaps that exist in training in FAIR and AI-Ready Data?
  - e.g. in terms of skills and competencies, creating collaborations, biomedical research areas, data types, trainees,…
- What are the key challenges in integrating ethics into training for FAIR and AI-ready data?
- What does the future of training in this space look like, in 5 year? In 10 years?
- What is the value of tools, services, and training opportunities from the private sector? What are some examples of impactful potential uses for the research community?

BREAK

2:30 p.m. – 2:35 p.m.

Readout from Breakouts

2:35 p.m. – 3:05 p.m. Readout from Breakouts

- Recap: One volunteer from each group, share most interesting points of discussion from your breakout in 5 minute or less

Open Conversation

Open Conversation

- Please join the SLIDO platform:
  - https://app.sli.do/event/4vedY5WqKT4JU9eTJpxAc5
  - Event Code: 2171247

Thank you!!!

Thank you!

Michael Spittel, Ph.D.
Health Scientist Administrator
Office of Data Science Strategy

Mark Dennis
Deputy Director,
Conference Services at The Scientific Consulting Group, Inc.

NIH-Wide working groups in AI-Workforce and AI-Readiness

https://www.scgcorp.com/odssaicloseout2022/

Join us again on Nov 1st!

We will be joined by recipients of the AI-Readiness supplements and ODSS leadership.