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

**AIM AHEAD**

Partnerships

Research

Infrastructure

Training

**Goals**:

1. Increase the **participation** and **representation** of underrepresented researchers and communities in AI/ML research
2. Address health disparities and inequities using AI/ML
3. Improve the capabilities of emerging technology, use of EHR, and other data

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

AIM AHEAD

# Leadership Core Hub MPIs



**Jamboor Vishwanatha**
Central Hub

**Harlan Jones**
Central Hub

**Usha Sambamoorthi**
Central Hub

**Bettina Beech**
South Central Hub

**Anil Shanker**
Southeast – Meharry Hub
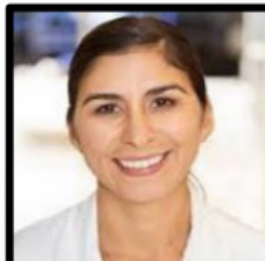
**Herman Taylor**
Southeast – Morehouse Hub

**Evelinn Borrayo**
North/Midwest Hub

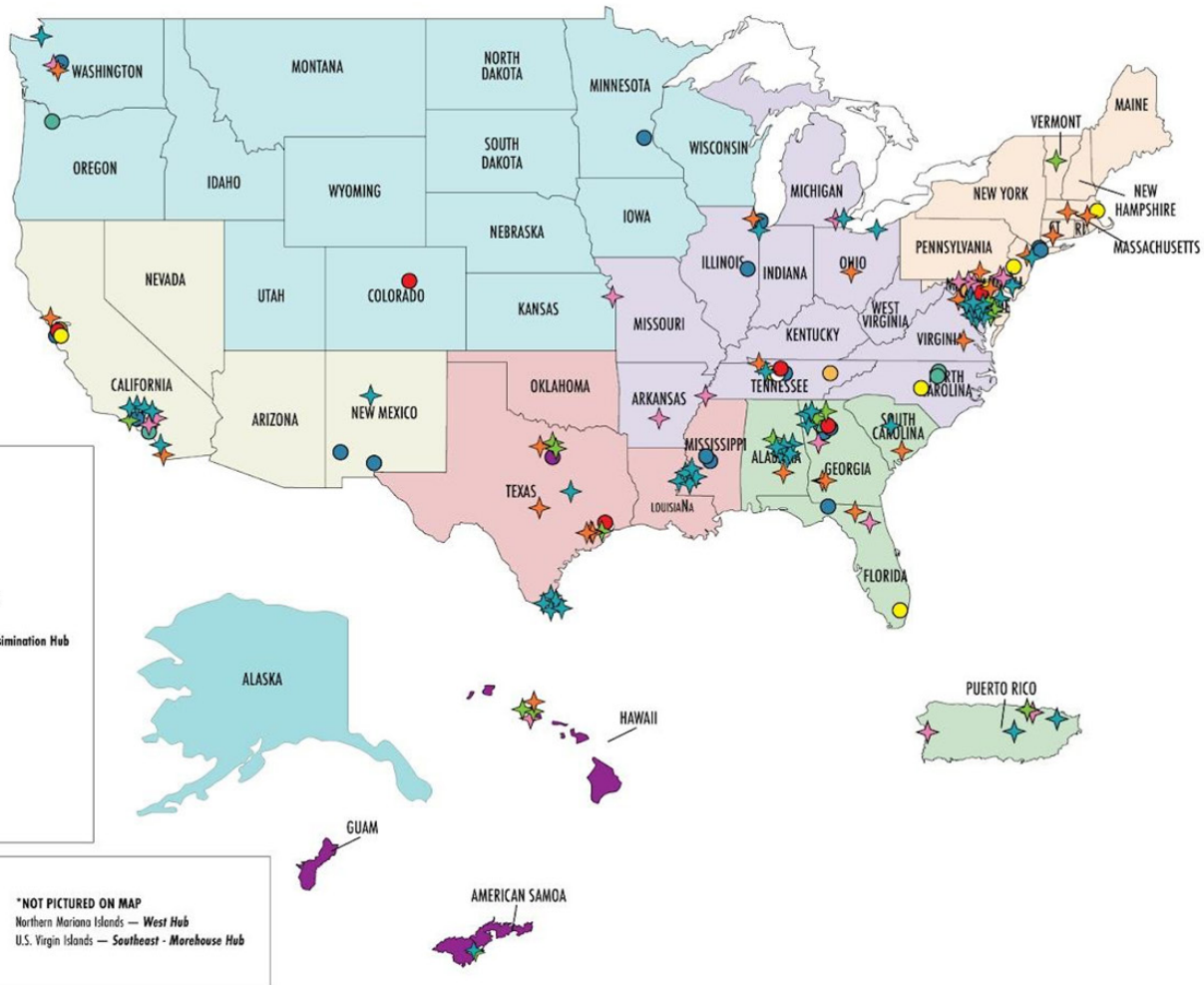**Spero Manson**
North/Midwest Hub

**Keith Norris**
West Hub

**Alejandra Casillas**
West Hub

**Roland Thorpe**
Northeast Hub

**Toufeeq Ahmed**
Communications Hub

**Core**
- Data Research Core
- Data Science Training Core
- Infrastructure Core
- L/A Core
  - Primary LAC Institution
  - Central Hub
  - Communications & Dissimination Hub

**Hubs**
- North and Midwest Hub
- Northeast Hub
- South Central Hub
- Southeast - Meharry Hub
- Southeast - Morehouse Hub
- West Hub

**Awards**
- Pilot Project
- Leadership Fellow
- Research Fellow
- DSTC Pilot Program

*NOT PICTURED ON MAP
Northern Mariana Islands — *West Hub*
U.S. Virgin Islands — *Southeast - Morehouse Hub*

WASHINGTON
MONTANA
NORTH DAKOTA
MINNESOTA
MAINE
VERMONT
NEW HAMPSHIRE
OREGON
IDAHO
WYOMING
SOUTH DAKOTA
WISCONSIN
MICHIGAN
NEW YORK
MASSACHUSETTS
NEVADA
UTAH
COLORADO
NEBRASKA
IOWA
ILLINOIS
INDIANA
OHIO
PENNSYLVANIA
RI
CALIFORNIA
ARIZONA
NEW MEXICO
KANSAS
MISSOURI
KENTUCKY
WEST VIRGINIA
VIRGINIA
ARKANSAS
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
OKLAHOMA
TEXAS
LOUISIANA
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
ALASKA
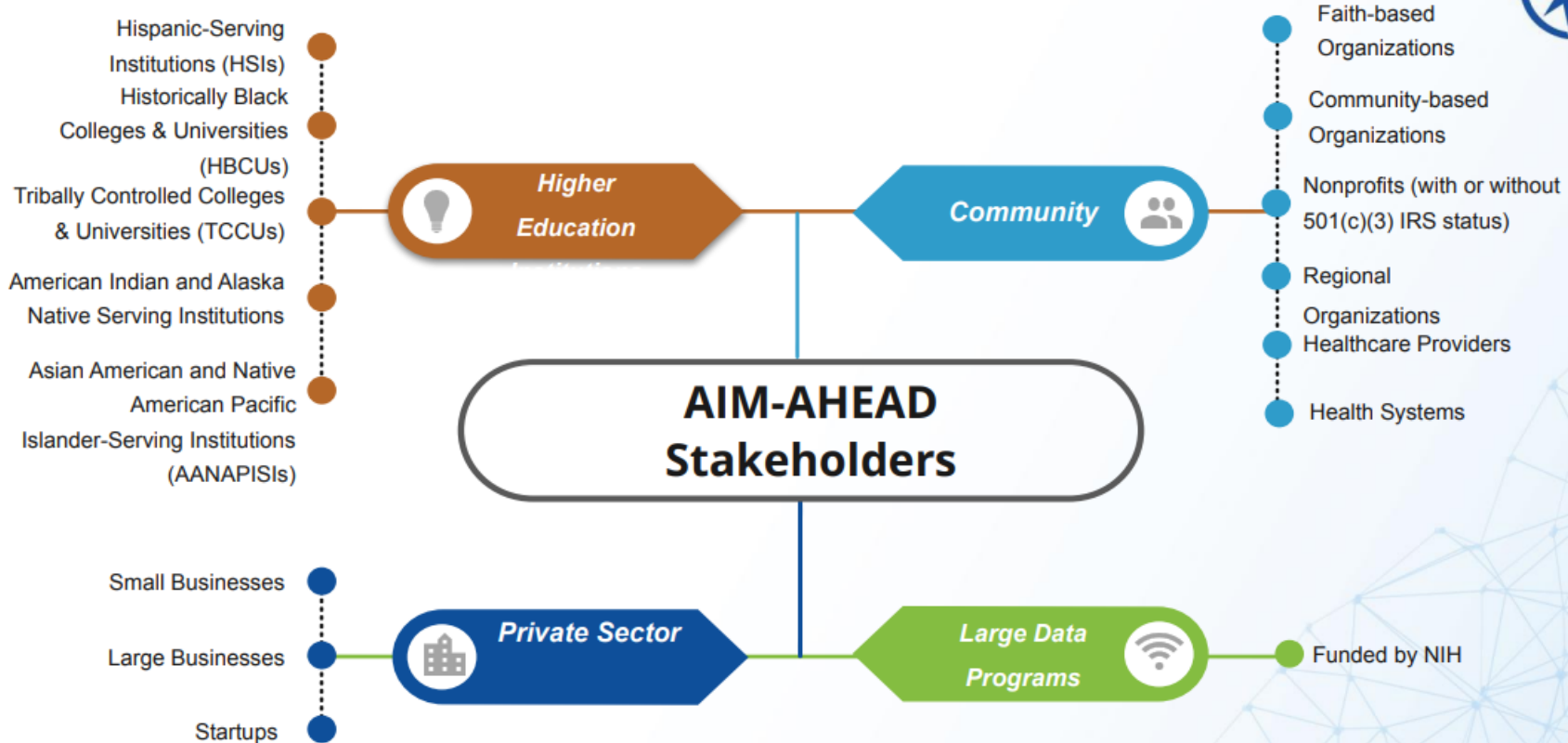HAWAII
GUAM
AMERICAN SAMOA
PUERTO RICO

# AIM-AHEAD North Stars

The leadership team worked with local communities and stakeholders to identify priority health disparity issues, which are known as the AIM-AHEAD North Stars.

| North Star | Description |
|:---:|---|
| 1 | Develop a diverse, equitable, and inclusive AI/ML workforce |
| 2 | Increase knowledge, awareness, and national-scale community engagement/ empowerment in AI/ML |
| 3 | Use AI/ML to address disparities and minority health in behavioral health, cardiometabolic health, and cancer |
| 4 | Build Community capacity and infrastructure in AI/ML to address community-centric health disparities and minority health |

AIM-AHEAD Stakeholders

**Higher Education Institutions**
- Hispanic-Serving Institutions (HSIs)
- Historically Black Colleges & Universities (HBCUs)
- Tribally Controlled Colleges & Universities (TCCUs)
- American Indian and Alaska Native Serving Institutions
- Asian American and Native American Pacific Islander-Serving Institutions (AANAPISIs)

**Community**
- Faith-based Organizations
- Community-based Organizations
- Nonprofits (with or without 501(c)(3) IRS status)
- Regional Organizations
- Healthcare Providers
- Health Systems

**Private Sector**
- Small Businesses
- Large Businesses
- Startups

**Large Data Programs**
- Funded by NIH

# AIM-AHEAD Accomplishments in 2022

- 22 **Research Fellowships**: Engage 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**: Prepare diverse leaders to champion the use of AI/ML in addressing persistent health disparities

- 22 **Pilot research projects:** Test new paradigms of research, data analysis, and new ways for underrepresented groups to derive value from their own health data.

- 46 **Professional Development**: train underrepresented healthcare workers to enhance awareness and understanding of AI and health equity.

- **AIM-AHEAD connect** platform launched as a virtual hub for research at the intersection of AI/ML and health equity.

- Numerous webinars and symposia, including AI for Health Equity (AIEHS 2022)

# Address Health Disparities and Inequities Using AI/ML

## Houston Methodist Research Institute
*Dr. Amy Waterman*

❖ Enhance the Kidney Transplant Derailers Index to Predict Transplant Drop-Out Risk for African American and Hispanic Patients

❖ Novel clinical- and community-level variables in multiethnic populations

## University of North Texas
*Dr. Suman Niranjan*

❖ Evaluate bias in predictive and explainable ML algorithms among older adults with cancer

❖ Multiple data sources, SDoH, cover diverse groups, including rural populations

## The University of Hawaii at Manoa
*Dr. Alexander Stokes*

❖ Address intersex under-diagnosis/under-recognition

❖ Mitigate bias in the application of AI/ML to intersex UD/UR

## University of California, Irvine
*Dr. Luohua Jaing*

❖ Cardiometabolic risk prediction among AI/AN adults

❖ Increase AI/AN stakeholder active engagement and collaboration in the AIM-AHEAD Consortium

# Community Centered – Hub-Specific Pilot Projects

## Central Hub

- Make existing Papakolea community data AI/ML ready

- Integrate genomics and EHR to address lung cancer for Native Hawaiians and Other Pacific Islanders (NH/PI)
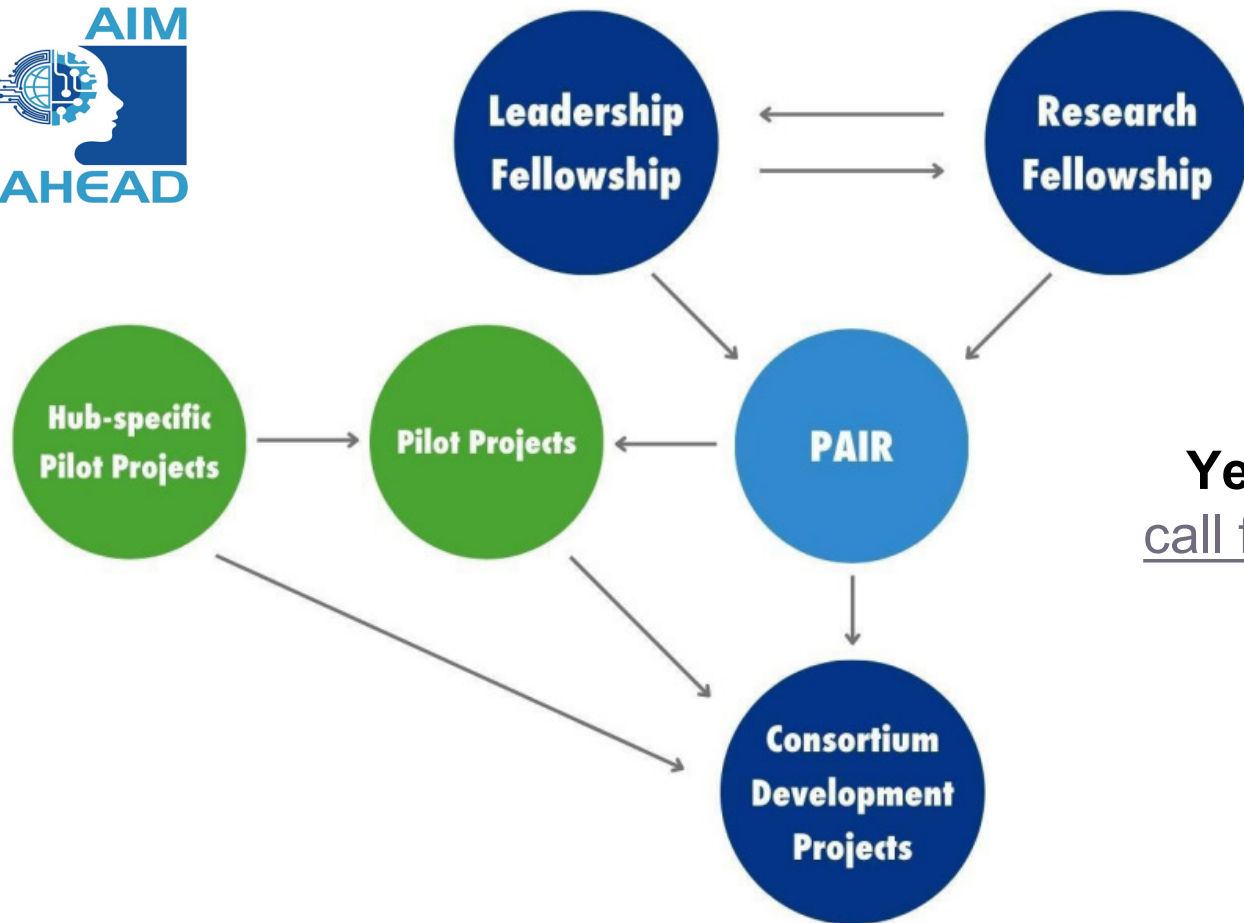
## West Hub

- Conduct large-scale analysis to address cardiometabolic health in American Indian/Alaska Native (AI/AN) and NH/PI patients

- Collaborate with the Los Angeles County Department of Health Services on EHR and digital health uptake among Spanish-speaking patients

## Southeast Hub-Meharry

- Identify healthcare biases and determinants of high cancer death rates in Rural Appalachia

- Collaborate with Vibrent Health Inc, AWS, and Appalachian Clinical Translation Science Institute

## North/Midwest Hub

- AI chatbot to assist AI/AN patients with a diabetes diagnosis, self-care, and management

**AIM-AHEAD
Year 2 Programs**
call for year 2 funding

# Collaborations with NIH-Funded Programs

- **AIM-AHEAD and NCATS (N3C)**

  - Didactic and hands-on training in
    - Data Harmonization
    - Infrastructure
    - Good Algorithmic Practice
    - Project-based training to access and analyze N3C data
      - **55** AIM-AHEAD Researchers and Students

- **AIM-AHEAD and AllofUs**

  - Concierge services and training to access and analyze All of Us data
    - **25** AIM-AHEAD Researchers and Students

- **AIM-AHEAD and Bridge2AI**

  - Mentored research internship program at the intersection of AI and biomedical research.
    - **4** AIM-AHEAD Researchers

# NOT-OD-23-123: Supplement to Promote Capacity Building

- Enhance institutional data science capacity through:
  - Growing human capital with data science competencies.
  - Developing or expanding institutional infrastructure for conducting data science-relevant research.
  - Building data science partnerships.
- Eligible parent awards:
  - NIMHD: Research Centers in Minority Institutions (RCMI).
  - NIGMS: Institutional Development Award (IDeA).
  - NCI: Partnerships to Advance Cancer Health Equity (PACHE).
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-23-123.html

**Anticipated Awards in FY 2023:**

- 3 RCMI supplements (NIMHD).
- 8 IDeA program supplements (NIGMS).
- 2 PACHE supplements (NCI):
  - Florida Agricultural and Mechanical University
  - University of Massachusetts Boston

**Next Submission Date:**
April 1, 2024
**ODSS Contact:**
Dr. Raphael Isokpehi
ds_workforce@nih.gov

# Work at NIH: DATA Scholar Program

## Data and Technology Advancement National Service Scholar Program

- Recruit talents with **advanced data science expertise** to the NIH to use transformative approaches that lead to increased efficiency, innovative research, tool development and analytics.

- One to two years commitment.

- In addition to their own project, scholars participate in workgroups and collaborations, and contribute in many ways to the NIH

- https://datascience.nih.gov/data-scholars-2023

**Open for Applications:** Late 2023 / Early 2024

**Contact:**
Dr. Bryan Kim
ds_workforce@nih.gov

# New Pilot: NIH DataPath Program

*Goal: To recruit and develop **early career** data science talents from diverse backgrounds to contribute their expertise to NIH operations while gaining valuable experience within the NIH environment.*

- Collaborate with the **U.S. Digital Corps Program.**
- Recruit **postbacs** and **post Masters** data talents to work at the NIH for 2 years.
- The program will:
  - Provide immediate data science capabilities for the NIH.
  - Foster a pipeline of skilled professionals who can contribute to the future of data-driven research and operations at NIH.

UNITED STATES
**DIGITAL CORPS**

## Five Fellow Tracks:

- Cybersecurity.
- Data Science and Analytics.
- Design.
- Product Management.
- Software Engineering.

**Open for Applications:**
Late 2023 / Early 2024

**Contact:**
Evelyn Botchway
ds_workforce@nih.gov

# Communication and Dissemination Hub

## connect.aim-ahead.net



**Join AIM-AHEAD Connect**

Connect with diverse mentors and mentees from across the country to seek advice and mentoring

Build your Mentoring network to further your career, upload your CV, search for members and their CVs and research interests.

Find mentors in your area of research or interest using a guided process and connect with Mentees across the nation to enhance diversity.

Collaborate with other members in the AIM-AHEAD Connect network by joining groups, add status updates, share documents, messaging, and search features.

| 1,557 | 829 | 537 | 67 |
|-------|-----|-----|-----|
| Mentees | Mentors | Members | Groups |

### JOIN US

Email address (Institution email preferred)

Password

First Name | Last Name

Current Title

Research & Career Interests

Current Institution (select from the list)

Type current institution name if not listed above

Zip code

Select your role in AIM-AHEAD Connect

Select Citizenship Status (For Mentees Only)

☑ I am 18 years or older, and agree to the AIM-AHEAD Connect User Agreement and Information and Privacy Policy

JOIN

Any inquiries related to AIM-AHEAD

Contact:

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samson.gebreab@nih.gov or
AIM-AHEAD@od.nih.gov