

# AIM-AHEAD AI FOR HEALTH EQUITY 2022 VIRTUAL SYMPOSIUM: WORKSHOP SERIES

Workshop Series | July 5th-29th, 2022

## Contact Information

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**Got questions? Check out the [AIM-AHEAD Help Desk](#)**

## What is AIM-AHEAD, the Symposium, and the Workshop Series?

The AIM-AHEAD Coordinating Center is funded by the NIH to increase researcher diversity and health equity in the field of AI/ML. The AI for Health Equity Symposium is a 2-day virtual conference, a Startup competition, and a 4-week workshop series all delivered in a virtual format. The focus of this symposium is on health equity and all content should be geared toward health equity, health disparities, and AI/ML challenges, applications, and solutions.

We have developed a workshop schedule for the month of July which includes 12 workshops covering 19 days of topics including the basics, ethics in AI, implementing and conducting an AI/ML project in low-resource institutions, knowledge and communication for leadership, ML methods with Healthcare Data, tools for deep learning exploration and understanding deep learning use cases, cutting edge applications of AI/ML on biomedicine and beyond, and finally a career development workshop at the end of the series to help early career AI/ML professionals and those interested in breaking into the field develop job searching skills unique to the AI/ML field.

## Registration

You may register to attend all or some of the workshops in the series. Attendance for the hands-on portion of the workshop series is limited to 20 people and is first-come, first-serve for those who meet inclusion criteria. Check whether you qualify for priority registration [here](#).

*Priority registration will be open through June 28th, and then registration will open to everyone on June 28th for participation in the hands-on portion if there are openings. Although participation in the workshop is limited, anyone may sign up to watch/listen and engage through Q+A by registering [here](#).*



# AI FOR HEALTH EQUITY 2022 SYMPOSIUM

JULY 2022

MON	TUES	WED	THURS	FRI
4 <b>INDEPENDENCE DAY</b>	5 <b>The Basics:</b> • Equity/disparities • SEDoH • What is AI/ML/data science/epi/statistics/computer science/data mining/automation • AI use cases • Successes, challenges, and opportunities	6 <b>The Basics pt II:</b> • AI/ML - two camps • AI/ML examples • What to know about AI/ML & Health - complexity of health, large data/big data, common myths, prescription, prescription, association, causation • Software, Hardware & Infrastructure (including Cloud)	7	8 <b>Ethics in AI/ML</b> • What is ethics in AI/ML • Data ethics • Algorithm bias • Community participation
11 <b>All of Us Data &amp; Data Browser</b>	12 <b>Implementing AI/ML for health equity applications in low-resource settings:</b> • Health equity disparities & inequities - definition and common terms • Operating systems/platforms (open source & proprietary) • What does an ideal AI/ML environment look like? • Working around for low-resource settings • How can I create my own low-cost infrastructure? • Players (systems architect, data scientist, statistician, content expert) • Software	13	14 <b>Conducting a project in AI/ML for health equity: from start to finish for low-resource institutions</b> • Research question • Data - challenges & troubleshooting • Model Building 101 • Execution in R or Python • Interpretation • Reporting	15
18 <b>AI/ML Knowledge and Communication for Leadership in Healthcare</b>	19 <b>ML Methods with Healthcare Data</b> • Supervised Learning (classification, regression) • Unsupervised Learning • Interpretable AI/ML (SHAP Values)	20 <b>Tools for Deep Learning Exploring and Understanding DL use cases in Biomedicine &amp; Beyond</b>	21 • Use cases (music, images, voice, healthcare, and more) • Classification models - build and train	22
25 <b>Cutting-Edge AI/ML Applications</b> • SageMaker Clarify	26	27 <b>Cutting-Edge AI/ML Applications</b> • Voice-assisted technology, NLP, visual/optical technology	28	29 <b>Career Development</b> • How to build a competitive resume in AI/ML and healthcare • How to make your LinkedIn profile work for you • Interview advice - how to answer content questions and come off as a professional in AI • How to network like a Rockstar

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#AIHES2022

WORKSHOP SCHEDULE

- The Basics I (July 5th; 11:00 am - 2:00 pm CT)**
  - Equity/disparities
  - SEDoH
  - What is AI/ML/data science/epi/statistics/computer science/data mining/ automation
  - AI use cases
  - Successes, challenges, and opportunities
- The Basics II (July 6th-7th; 11:00 am - 2:00 pm CT)**
  - AI/ML - two camps
  - AI/ML examples
  - What to know about AI/ML & Health - complexity of health, large data/big data, common myths, prescription, prescription, association, causation
  - Software, Hardware & Infrastructure (including Cloud)
- Ethics in AI/ML (July 8; 12:00 pm - 3:00 pm CT)**
  - What is ethics in AI/ML
  - Data ethics
  - Algorithm bias
  - Community participation
- All of Us Data & Data Browser (July 11; 1:00 pm - 3:00 pm CT)**

- How to access All of Us Data
  - Possibilities of All of Us Data
- 5. Implementing AI/ML for health equity applications in low-resource settings (July 12-13; 2:00 pm - 4:00 pm CT)**
    - Health equity disparities & inequities - definition and common terms (cloud, workbench, other infrastructure)
    - Operating systems/platforms (open source & proprietary)
    - What does an ideal AI/ML environment look like?
    - Working around for low-resource settings (requirements, data, IRB, infrastructure, internet issues, cloud, GPU, CPU)
    - How can I create my own low-cost infrastructure? (galaxy projects, using our laptop, connecting a couple desktops to create a server)
    - Players (systems architect, data scientist, statistician, content expert)
    - Software
  - 6. Conducting a project in AI/ML for health equity from start to finish in low-resources settings (July 14-15; 12:00 pm - 3:00 pm CT)**
    - Research question
    - Data - challenges & troubleshooting
    - Model Building 101 (training/testing, model performance metrics, number of models, model selection, types of models, deep learning)
    - Execution in R or Python
    - Interpretation
    - Reporting
  - 7. AI/ML knowledge and communication for leadership in healthcare (July 18; 1:00 - 3:30 pm CT)**
  - 8. ML methods with Healthcare Data (July 19; 12:00 pm - 3:00 pm CT)**
    - Supervised Learning (classification, regression)
    - Unsupervised Learning
    - Interpretable AI/ML (SHAP Values)
  - 9. Tools for Deep Learning (DL) and understanding DL use cases in biomedicine & beyond (July 20-22; 11:00 am - 2:00 pm CT)**
    - Use cases (music, images, voice, healthcare, and more)
    - Classification models - build and train
  - 10. Cutting edge AI/ML applications I (July 25; 2:00 pm - 4:00 pm CT)**
    - SageMaker Clarify
  - 11. Cutting edge AI/ML applications II (July 26-28; 1:30 - 4:00 pm CT)**
    - Voice-assisted technology, NLP, visual/optical technology
  - 12. Career Development (July 29; 2:00 pm - 4:30 pm CT)**
    - How to build a competitive resume in AI/ML and healthcare
    - How to make your LinkedIn profile work for you
    - Interview advice -- how to answer content questions and come off as a professional in AI
    - How to network like a Rockstar