

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

Workshop Series | July 5th-29th, 2022

Contact Information

AIHES2022 Chair: Nawar Shara, PhD

AIHES2022 Workshop Chair: Usha Sambamoorthi, PhD

AIHES 2022 Conference coordinators: Sara Stienecker sarastienecker@aim-ahead.net and Tom Whitfield michaelthomaswhitfield@aim-ahead.net

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 INDEPENDENCE DAY	5 The Basics: • Equity/disparities • SEDoH • What is AI/ML/data science/epi/statistics/computer science/data mining/automation • AI use cases • Successes, challenges, and opportunities	6 The Basics pt II: • 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 Ethics in AI/ML • What is ethics in AI/ML • Data ethics • Algorithm bias • Community participation
11 All of Us Data & Data Browser	12 Implementing AI/ML for health equity applications in low-resource settings: • 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 Conducting a project in AI/ML for health equity: from start to finish for low-resource institutions • Research question • Data - challenges & troubleshooting • Model Building 101 • Execution in R or Python • Interpretation • Reporting	15
18 AI/ML Knowledge and Communication for Leadership in Healthcare	19 ML Methods with Healthcare Data • Supervised Learning (classification, regression) • Unsupervised Learning • Interpretable AI/ML (SHAP Values)	20 Tools for Deep Learning Exploring and Understanding DL use cases in Biomedicine & Beyond	21 • Use cases (music, images, voice, healthcare, and more) • Classification models - build and train	22
25 Cutting-Edge AI/ML Applications • SageMaker Clarify	26	27 Cutting-Edge AI/ML Applications • Voice-assisted technology, NLP, visual/optical technology	28	29 Career Development • 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

www.AIM-AHEAD.net

#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 - 2:00 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 - 2:00 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 - 2:00 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