SAIL

Symposium on Artificial Intelligence for Learning Health Systems

INTEGRATING AI INTO CLINICAL MEDICINE

MAY 9–12 • 2023
RÍO GRANDE • PUERTO RICO

HARVARD MEDICAL SCHOOL | BLAVATNIK INSTITUTE BIOMEDICAL INFORMATICS

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WELCOME

Dear SAIL Attendees:

The Symposium on Artificial Intelligence for Learning Health Systems (SAIL) is returning for its second in-person voyage. This is in the middle of turbulent excitement about the emergence of large language models and how it is affecting healthcare today. SAIL's focus on AI being deployed in real-world healthcare settings is therefore as relevant as we hoped it would be when we first planned the symposium. As before, you'll hear from some of the world's leading experts in healthcare applications of AI. Our capped attendance will ensure that, like last year, you can have substantive off-the-record conversations with them during or between the scheduled sessions. Also, you don't have to choose tracks because there is only one track by design.

As detailed in the agenda, the scheduled sessions include discussions of:

- Surgical applications of AI
- AI in improving clinical trials
- Real-world lessons learned from deploying AI in the clinic
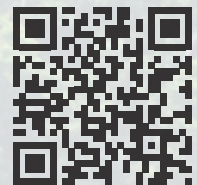- Large language models in healthcare

We look forward to joining you in engaging dialogues, charting the ways for safe and effective applications of AI to healthcare.

—SAIL Program Committee

Schedule at a Glance

DAY 1 • TUESDAY MAY 9	
4:00–4:30pm	**REGISTRATION & BADGE PICKUP**
4:30–6:00pm	**DEEP DIVE — A Practical Guide for Implementing ML in EHRs** » Patrick Lyons, Oregon Health & Science University » Karandeep Singh, University of Michigan Medical School
6:00–7:30pm	**WELCOME RECEPTION & REGISTRATION** » Dinner, drinks and networking	Interactive rum tasting with Nativo Rumeliers

DAY 2 • WEDNESDAY MAY 10	
8:30–9:00am	**BREAKFAST & LATE REGISTRATION**
9:00–9:10am	**OPENING REMARKS**
9:10–10:20am	**PANEL 1 — Surgical AI** » Gabriel Brat, Beth Israel Deaconness Medical Center; Harvard Medical School » Rachael Callcut, University of California, Davis » Gretchen Jackson, Intuitive; AMIA » Genevieve Melton-Meaux, University of Minnesota Medical School
10:25–11:00am	**INVITED TALK 1 — Human-Centered Design for the Practical Deployment of AI in Pediatric Healthcare** » Ayanna Howard, The Ohio State University
11:05–11:25am	**SPOTLIGHT TALK 1 — Has machine learning made a difference yet? A retrospective analysis of in-hospital mortality prediction** » Michael Patton, University of Alabama
11:25–11:45am	**SPOTLIGHT TALK 2 — Deployment and implementation of a multi-service surgical case length prediction model** » Hamed Zaribafzadeh, Duke University
11:45am–12:05pm	**SPOTLIGHT TALK 3 — Fostering the translation of AI to the clinic by building a physiological data streaming system** » Dmytro Lopushanskyy, University of Toronto
12:05–1:20pm	**LUNCH**
1:20–2:00pm	**OPENING KEYNOTE — The Emergence of General AI for Medicine** *(Live Streamed)* » Peter Lee, Microsoft Research & Incubations
2:05–2:45pm	**INVITED TALK 2 — Inpatient and Outpatient Clinical Translation of AI** » Narjes Razavian, New York University
2:45–3:15pm	**BREAK**
3:15–4:25pm	**PANEL 2 — Tales from the Trenches** » Mark Michalski, AWS Healthcare » Erin Palm, Suki AI » Nigam Shah, Stanford University » Lauren Wilcox, Google Research » Karley Yoder, GE Healthcare
4:30–6:00pm	**POSTER SESSION**
6:00–7:30pm	**DINNER BANQUET — Puerto Rican Beachside Dinner**
7:00–8:00pm	**BREAKOUT — Surgical AI Chat**

DAY 3 • THURSDAY MAY 11

Time	Event
8:30–9:00am	**BREAKFAST**
9:00–9:40am	**INVITED TALK 3 — COVID-19 screening of immigrants in Greece** » Hamsa Bastani, Wharton School, University of Pennsylvania
9:45–10:30am	**INVITED TALK 4 — OpenMRS EHR Systems in Kenya to improve HIV care** » Joseph Hogan, Brown University » Ann Mwangi, Moi University, Kenya
10:30–11:00am	**BREAK**
11:00am–12:00pm	**FIRESIDE CHAT — Implementation: Who Gets Stuff Done?** » Babatope Fatuyi, UTHealth Houston » Maia Hightower, Chicago Medicine; Equality AI » Kevin Johnson, Perelman School of Medicine, University of Pennsylvania
12:00–1:30pm	**LUNCH**
1:30–1:50pm	**SPOTLIGHT TALK 4 — Improving dermatology classifiers across populations using images generated by large diffusion models** » James Diao, Harvard Medical School and MIT
1:50–2:10pm	**SPOTLIGHT TALK 5 — Multimodal image–text matching improves retrieval-based chest x-ray report generation** » Jaehwan Jeong, Stanford University
2:15–3:15pm	**FIRESIDE CHAT — Who Drives Investment?** » John Beadle, Aegis Ventures » Molly Gibson, Flagship Pioneering » Nickolas Mark, Intermountain Ventures
3:15–3:45pm	**BREAK**
3:45–5:00pm	**PANEL 3 — Large Language Models** » Sébastien Bubeck, Microsoft Research » Isaac Kohane, Harvard Medical School; *NEJM AI* » Vivek Natarajan, Google Health AI » Belwadi Srikanth, Suki
5:00–5:30pm	**BREAK** to prepare for rainforest shuttle
5:30–8:00pm	**DINNER — El Portal Pavilion in the Rainforest** » Shuttles depart to/from rainforest 5:30 & 7:30 | Drinks & Dinner 6:00–7:30pm

DAY 4 • FRIDAY MAY 12

Time	Event
8:30–9:00am	**BREAKFAST**
9:00–9:40am	**INVITED TALK 5 — Apple Heart Study and REACT-AFib** » Marco Perez, Stanford University
9:45–11:00am	**PANEL 4 — AI in Clinical Trials** » Arnaub Chatterjee, TriNetX; Carlyle Group » Xiao Liu, University Hospitals Birmingham, UK » David Ouyang, Cedars-Sinai Medical Center » Lily Peng, Verily
11:00–11:10am	**MINI BREAK** for AV setup
11:15am –12:00pm	**CLOSING KEYNOTE — Open-Source Algorithms in Type 1 Diabetes: Achievements and Challenges from a Patient Perspective** *(Live Streamed)* » Nina Tousch, Glucose Toujours
12:00–1:00pm	**CLOSING REMARKS & LUNCH**

Registration & Badge Pickup *(continues at 6pm Reception)*
4:00—4:30pm | EL YUNQUE BALLROOM

Deep Dive —
A Practical Guide for Implementing ML in EHRs
4:30—6:00pm | EL YUNQUE BALLROOM

Patrick Lyons
Assistant Professor of Medicine,
Oregon Health & Science University

Karandeep Singh
Assistant Professor of Learning
Health Sciences, University of
Michigan Medical School

In this deep dive, we will address common social and technical challenges faced by health systems in evaluating and implementing machine learning-based clinical workflows within electronic health records. We will discuss social issues related to governance, selection and evaluation of models, vendor- vs. researcher-based models, and regulatory questions. On the technical side, we will discuss issues related to database structures, technical standards, vendor-specific model formats, application programming interfaces, and model monitoring. We will end with a guide on how to get started, presented from a health systems perspective, with concrete examples drawing from our experience in sepsis and clinical deterioration.

WELCOME RECEPTION & REGISTRATION
Dinner, Drinks & Networking
6:00–7:30pm
Food Truck Patio

Pick up your badge and a program if you didn't already, and join us for dinner, drinks and networking! This reception will also feature an optional interactive, guided rum tasting with local artisans **Nativo Rumeliers.**

"From deep inside the countryside of Puerto Rico, we bring you an authentic cultural insight to traditional Puerto Rican rum making. Utilizing the various types of flavor combinations of the most exotic fruits that our island harvests throughout the different seasons."

Breakfast & Late Registration
8:30—9:00am | **EL YUNQUE BALLROOM**

Opening Remarks
9:00—9:10am | **EL YUNQUE BALLROOM**

Panel 1 — Surgical AI
9:10—10:20am | **EL YUNQUE BALLROOM**

Gabriel Brat (Moderator)
Trauma Surgeon, Beth Israel
Deaconness Medical Center;
Assistant Professor of Surgery,
Harvard Medical School

Rachael Callcut
Division Chief & Associate
Dean of Data Science,
UC Davis

Gretchen Jackson
Vice President and Scientific
Medical Officer, Intuitive;
President, AMIA

Genevieve Melton-Meaux
Professor, University of
Minnesota Medical School

AI is being used to make new tools that improve surgeons' clinical practice and healthcare outcomes. In our "Surgical AI" panel, we learn about the emerging tech that is revolutionizing the operating room.

Also join the Surgical AI Breakout Chat during this evening's dinner to continue the discussion! (See page 7.)

Invited Talk 1 —
Human-Centered Design for the Practical Deployment of AI in Pediatric Healthcare
10:25—11:00am | **EL YUNQUE BALLROOM**

With the recent advances in robotics and artificial intelligence, early intervention protocols using robots is now ideally positioned to make an impact in the pediatric healthcare domain. There are numerous challenges, though, that still must be addressed to enable successful interaction between patients, clinicians, and robots—developing interfaces for clinicians to communicate with their AI counterparts; developing learning methods to endow robots with the ability to playfully interact with the child; and ensuring that the system can provide feedback to the parent and clinician in a trustworthy manner. In this presentation, I will discuss the role of human-centered design for the practical deployment of AI, with an emphasis on pediatric robotics that can enable a healthier, less stressful, equality of life, now and in the future.

Ayanna Howard
Dean of Engineering at
The Ohio State University and
Monte Ahuja Endowed Dean's Chair

Spotlight Talk 1 — Has machine learning made a difference yet? A retrospective analysis of in-hospital mortality prediction

11:05—11:25am | EL YUNQUE BALLROOM

Michael Patton
MD/PhD Candidate, University of Alabama

Spotlight Talk 2 — Deployment and implementation of a multi-service surgical case length prediction model

11:25—11:45am | EL YUNQUE BALLROOM

Hamed Zaribafzadeh
Biostatistician, Duke University

Spotlight Talk 3 — Fostering the translation of AI to the clinic by building a physiological data streaming system

11:45am—12:05pm | EL YUNQUE BALLROOM

Dmytro Lopushanskyy
Senior Data Analyst, SickKids Toronto; Chief Technology Officer, Harmix

Lunch

12:05—1:20pm | YUNQUE FOYER

Opening Keynote — The Emergence of General AI for Medicine

1:20—2:00pm | EL YUNQUE BALLROOM | LIVE STREAMED

Large language models, such as GPT-3.5 and later more powerful ones, have emerged as powerful new tools for information work, particularly when coupled with chat interfaces as in ChatGPT. These systems are demonstrating impressive capabilities across many domains, and they have the potential to improve health-care delivery and accelerate medical science. In this talk, we will present the results of our intensive year-long study exploring the benefits and risks of applying these systems in medicine. Our findings indicate that these systems may be the most significant technological advance in health care and medicine to date, despite receiving no specialized training in the field. We will showcase examples of how general AI can be used in health care and medicine, and then discuss the implications for the future as these systems continue to evolve, becoming increasingly more intelligent and capable.

Peter Lee
Corporate Vice President,
Microsoft Research & Incubations

Invited Talk 2 — Inpatient and Outpatient Clinical Translation of AI

2:05—2:45pm | EL YUNQUE BALLROOM

I will discuss the clinical translation of AI in medicine and its impact on design, evaluation, and integration decisions, and I will review insights from studies at NYU Langone involving inpatient setting (COVID-19), and outpatient setting (Dementia) with Imaging and EHR data.

Narjes Razavian
Assistant Professor,
NYU Langone Health

Break

2:45—3:15pm

Panel 2 — Tales from the Trenches

3:15—4:25pm | EL YUNQUE BALLROOM

Mark Michalski (Moderator)
Worldwide Head, AWS Healthcare

Erin Palm
Strategic Advisor, Suki AI

Nigam Shah
Professor of Medicine, Stanford University; Chief Data Scientist, Stanford Healthcare

Lauren Wilcox
Senior Staff Research Scientist, Google Research

Karley Yoder
General Manager & Chief Digital Officer, Ultrasound, GE HealthCare

So you've designed an AI system to improve healthcare, but what will happen when you deploy it in the clinic? In this panel, we explore the successes and pitfalls our panelists have experienced firsthand.

Poster Session

4:30—6:00pm | EL YUNQUE BALLROOM

4:30—5:15pm Odd numbered posters
5:15—6:00pm Even numbered posters

DINNER BANQUET
Puerto Rican Beachside Dinner
6:00–7:30pm
Mirador Lawn

BREAKOUT — Surgical AI Chat
Grab a drink and join us for an informal roundtable discussion about the future of this field.
7:00–8:00pm
Mirador Pavilion

Breakfast
8:30—9:00am | EL YUNQUE BALLROOM

Invited Talk 3 —
COVID-19 Screening of Immigrants in Greece
9:00—9:40am | EL YUNQUE BALLROOM

In close collaboration with the Greek government, my co-authors and I deployed a novel reinforcement learning algorithm to allocate a limited number of COVID-19 tests to travelers visiting Greece, with the goal of identifying infected travelers to safeguard public health. Our algorithm processed millions of travelers in 2020 and identified nearly twice as many infections as commonly-employed random testing.

Hamsa Bastani
Assistant Professor, Operations Information and Decisions, Wharton School, University of Pennsylvania

Invited Talk 4 —
OpenMRS EHR Systems in Kenya to Improve HIV Care
9:45—10:30am | EL YUNQUE BALLROOM

Joseph Hogan
Professor and Chair, Department of Biostatistics, Brown University School of Public Health

Ann Mwangi
Associate Professor of Biostatistics, Moi University, Kenya

Ann Mwangi and Joseph Hogan will describe development, application, and implementation of machine learning algorithms for improving patient care in a large HIV care program in western Kenya. A key feature of this project is deep collaboration between statisticians (develop the algorithms), behavioral scientists (assess usabilityamong end users), clinicians (prioritize endpoints), and informatics experts (implementation in an EHR). Implementation is in OpenMRS, and the effectiveness of the ML-based decision support system is being evaluated using a randomized trial of 30 clinics serving around 150,000 patients.

Break
10:30—11:00am

Fireside Chat —
Implementation: Who Gets Stuff Done?

11:00am –12:00pm | EL YUNQUE BALLROOM

Babatope Fatuyi
Chief Medical Information
Officer, UTHealth Houston

Maia Hightower
EVP, Chief Digital Technology
Officer, UChicago Medicine;
CEO, Co-Founder, Equality AI

Kevin Johnson (Moderator)
David L. Cohen University Professor
of Pediatrics, Informatics, Engineering
and Science Communication,
University of Pennsylvania

Informatics leaders at healthcare systems across the country are implementing and overseeing AI solutions at the bedside and across the enterprise. They struggle to balance the opportunity with the costs and risks of AI. This panel will discuss the potential and practical implementation of AI within healthcare systems with leading chief technology and information officers.

Lunch

12:00–1:30pm | YUNQUE FOYER

Spotlight Talk 4 —
Improving dermatology classifiers across populations using images generated by large diffusion models

1:30–1:50pm | EL YUNQUE BALLROOM

James Diao
MD Candidate, Harvard Medical School and MIT

Spotlight Talk 5 —
Multimodal image–text matching improves retrieval-based chest x-ray report generation

1:50–2:10pm | EL YUNQUE BALLROOM

Jaehwan Jeong
Undergraduate Student, Stanford Artificial Intelligence Laboratory

Fireside Chat — Who Drives Investment?

2:15—3:15pm | EL YUNQUE BALLROOM

John Beadle
Co-Founder and Managing
Partner, Aegis Ventures

Molly Gibson (Moderator)
Senior Principal, Flagship Pioneering

Nickolas Mark
Co-Founder and Managing
Partner, Intermountain Ventures

Healthcare investing has seen a transformation, with hospital systems and traditional technology companies joining the field. Novel forms of joint venture and collaboration have grown out of an appreciation of the unique character of healthcare. Join us for a fascinating discussion with investors who represent these new models of investing.

Break

3:15—3:45pm

Panel 3 — Large Language Models

3:45—5:00pm | EL YUNQUE BALLROOM

Sébastien Bubeck
Senior Principal Research
Manager, Microsoft Research

Isaac Kohane (Moderator)
Professor and Chair, Department
of Biomedical Informatics,
Harvard Medical School;
Editor-in-Chief, *NEJM AI*

Vivek Natarajan
Research Lead,
Google Health AI

Belwadi Srikanth
Vice President, Product
Management and Design, Suki

Where are Large Language Models going to have the most beneficial impact upon the practice of medicine?

Break

5:00—5:30pm | PREPARE FOR RAINFOREST SHUTTLE

DINNER IN THE RAINFOREST
Shuttle Departures: Hotel 5:30pm | Rainforest 7:30pm
Dinner, Drinks & Networking: 6:00–7:30pm

5:30–8:00pm
El Portal Pavilion

The only tropical rainforest in the US, El Yunque spans 28,000 acres and is home to more than 240 types of trees, birds, native species like the coquí frog, and includes 25 waterfalls, several rivers and ancient petroglyphs of the indigenous Taíno.

Breakfast
8:30—9:00am | EL YUNQUE BALLROOM

Invited Talk 5 — Apple Heart Study and REACT-AFib
9:00—9:40am | EL YUNQUE BALLROOM

I will be focusing on the road that lies ahead, beyond the Apple Heart Study, in the digital health and wearable device space. We'll chat about the REACT-AF study and how work on deep learning with 12-lead ECGs could translate to the wearable ECG domain.

Marco Perez
Associate Professor of Medicine, Stanford University

Panel 4 — AI in Clinical Trials
9:45—11:00am | EL YUNQUE BALLROOM

Arnaub Chatterjee
Chief Product Officer, TriNetX; Senior Advisor, Carlyle Group

Xiao Liu (Moderator)
Senior Clinical Research Fellow, AI and Digital Health Research, University Hospitals Birmingham, UK

David Ouyang
Assistant Professor and Staff Physician, Cedars-Sinai Medical Center

Lily Peng
Director, Product Management, Verily Life Sciences

Clinical trials aren't just for drugs or devices anymore! In this panel, we hear from investigators on trials that evaluate the real-world impact of AI-based technologies on human health. Join us for this engaging discussion about the future of clinical research.

Mini Break — Speaker/AV Setup
11:00—11:10am | PLEASE BE SEATED BEFORE 11:15 CLOSING KEYNOTE

Closing Keynote — Open-Source Algorithms in Type 1 Diabetes: Achievements and Challenges from a Patient Perspective
11:15am—12:00pm | EL YUNQUE BALLROOM | LIVE STREAMED

Nina Tousch
Journalist and Chief Editor of *Glucose Toujours*

I will be talking about the power of the diabetes online community in the improvement of diabetes care through the example of open-source automated insulin delivery algorithms. I'll introduce open-source automated insulin delivery systems and discuss their legal, technical, scientific and psychological challenges. Eventually, diabetes technology is full of paradoxes: it is essential yet not accessible to everybody, helpful yet it brings new mental burdens, it increases our life expectancy yet it is not a cure to diabetes.

Closing Remarks & Lunch
12:00—1:00pm | YUNQUE FOYER

HAMSA BASTANI

Assistant Professor, Operations Information and Decisions, Wharton School, University of Pennsylvania

Invited Speaker

Hamsa Bastani is an Assistant Professor of Operations, Information, and Decisions, as well as Statistics and Data Science at the Wharton School, University of Pennsylvania. Her research focuses on developing novel machine learning algorithms for data-driven decision-making, with applications to healthcare, social good, and revenue management. Her work has received several recognitions, including the Wagner Prize for Excellence in Practice (2021), the Pierskalla Award for the best paper in healthcare (2016, 2019, 2021), the Behavioral OM Best Paper Award (2021), as well as first place in the George Nicholson and MSOM student paper competitions (2016). She previously graduated *summa cum laude* from Harvard with an AM in physics and an AB in physics and mathematics, and received her PhD in Electrical Engineering from Stanford.

JOHN BEADLE

Co-Founder and Managing Partner, Aegis Ventures

Fireside Chat (Investors)

Originally from Boston, John co-founded Aegis and serves as its Managing Partner. He has led the studio's day-to-day executive functions since inception, including the formation of Aegis's partnership with Northwell Health. In addition to his role at Aegis, John also leads the NY-based global special situations team at APL Group, a global private investment firm, and Aegis's sister company. Previously John worked in investment banking at Bank of America Merrill Lynch and in primary investments at John Laing Group. In his spare time, John loves to travel, attend music festivals, and cheer on his hometown Boston sports teams. John is also a recovering scratch golfer and loves to play whenever he can. He is a graduate of Harvard College and Tsinghua University, where he served as a Schwarzman Scholar.

GABRIEL BRAT

Trauma Surgeon, Beth Israel Deaconness Medical Center
Assistant Professor of Surgery, Harvard Medical School

Panel Moderator

Gabriel Brat is a trauma surgeon and critical care physician at Beth Israel Deaconess Medical Center and a faculty in biomedical informatics at Harvard Medical School. As the director of the Surgical Informatics Lab, Dr. Brat has a broad research focus on informatics tools to improve surgical outcomes. Notable recent works include clinical decision support tools to optimize surgical opioid prescribing and machine learning methods to better understand intra-operative events through video analytics and collaborative prediction algorithms. His multiple NIH grants aim to expand use of AI in healthcare and integrate large scale data into practice. As the co-founder of an acquired computer vision company, he teaches a health IT innovation course at Harvard Medical School and mentors several digital health startups. Gabriel has an undergraduate degree in bioengineering and a graduate degree in public health and biostatistics. He completed his medical training at Stanford University and his surgical residency at Johns Hopkins Hospital.

Speakers

SÉBASTIEN BUBECK

Senior Principal Research Manager, Microsoft Research

Panelist

Sébastien Bubeck is a Senior Principal Research Manager in the Machine Learning Foundations group at Microsoft Research (MSR). He joined the Theory Group at MSR in 2014, after three years as an assistant professor at Princeton University. His works on convex optimization, online algorithms and adversarial robustness in machine learning received several best paper awards (STOC 2023 best paper, NeurIPS 2018 and 2021 best paper, ALT 2018 and 2023 best student paper in joint work with MSR interns, COLT 2016 best paper, and COLT 2009 best student paper). He is now focused on understanding how intelligence emerges in Large Language Models (LLMs), and how to use this understanding to improve LLMs' intelligence, possibly towards building AGI.

RACHAEL CALLCUT

Rachael Callcut, Division Chief & Associate Dean of Data Science,
University of California, Davis

Panelist

Kim Rachael Callcut, MD, MSPH, FACS, serves as the Associate Dean of Data Science and Innovation for the UC Davis School of Medicine as well as Chief Research Informatics Officer for UC Davis Health. Callcut is a nationally recognized surgeon-scientist and expert in the field of data science. Callcut joined the UC Davis School of Medicine in March 2020 as the inaugural Vice Chair of Clinical Sciences in the Department of Surgery and is the Division Chief of Trauma, Acute Care Surgery, and Critical Care. clinician double board certified in General Surgery and Surgical Critical Care. She has a broad research portfolio of funding from the National Institutes of Health, Department of Defense, the California Institute of Regenerative Medicine, and industry.

Prior to joining UC Davis, Callcut served as inaugural Director of Data Science for the Center for Digital Health Innovation at UC San Francisco. Her work has resulted in technological innovations and more than 110 peer reviewed publications across a wide array of domains including health services research, artificial intelligence, health care delivery, and translational science. Callcut received her MD from the University of Cincinnati College of Medicine and her Master of Population Health Sciences from the University of Wisconsin School of Medicine.

ARNAUB CHATTERJEE

Chief Product Officer, TriNetX; Senior Advisor, Carlyle Group

Panelist

Arnaub joined TriNetX from Medidata AI, the data sciences entity of Medidata Solutions, where he served as Senior Vice President. Prior to Medidata, he was a leader and strategic advisor within McKinsey & Company, Merck, and the Obama Administration. Arnaub is passionate about education and is a faculty member at Harvard Medical School in the Department of Healthcare Policy, as well as at Cornell University in the Department of Policy Analysis and Management. In addition, he has been engaged by the Carlyle Group as an advisor focusing on their life sciences and technology strategy. Arnaub has served as a board member and advisor for a number of additional organizations including the World Economic Forum's Council for Biotechnology and Biospring Partners, a life sciences growth equity firm. Arnaub holds graduate degrees in health administration (MHA) and public administration (MPA) from Cornell University and earned his undergraduate degree from the University of Michigan.

BABATOPE FATUYI

CMIO, UTHealth Houston

Fireside Chat (Implementers)

Babatope Fatuyi, MD, serves as Chief Medical Information Officer for UTHealth Houston and part-time faculty member at the School of Biomedical Informatics. At UTHealth Houston, Fatuyi chairs the EHR Governance Taskforce that is responsible for the direction, prioritization, and approval of EHR designs and content. Under his leadership, subcommittees/councils work to ensure optimal patient outcomes through effective utilization of the Epic system and tools.

He also chairs the Steering Committee for the Center for Digital Healthcare Innovation. The center's purpose is to attain an end-to-end, integrated, patient-centric EHR for health care delivery, education, and research while driving maximal return on clinical technology investments. Fatuyi previously served as the Physician and Healthcare Executive/Informaticist of The Advisory Board Company (now Optum Health). He provided management and consulting services for EHR and clinical operations to hospitals, academic medical centers, and large, independent practices. Fatuyi also served as the Chief Medical Information Officer for NYC Health + Hospitals, where he led an EHR implementation across the five boroughs of New York City and more than 20 hospitals.

MOLLY GIBSON

Senior Principal, Flagship Pioneering

Panel Moderator

Molly Gibson serves as co-founder and chief strategy and chief innovation officer of Generate Biomedicines, a Flagship Pioneering company. At Generate, she oversees corporate strategy and drives innovation broadly to maximize impact of the company's generative biology platform. She is also a senior principal at Flagship Pioneering, working as part of a venture-creation team to found and grow companies at the intersection of biology and machine learning. Molly's work has resulted in multiple pending patents and publications, including articles in *Science* and *Nature.* In 2021, she was recognized in *Business Insiders*' list of 12 young serial entrepreneurs building the next generation of biotech startups and in 2020, she was named to *Endpoints News's* 20 under 40 list in biopharma. Molly received a PhD in computational and systems biology from Washington University in Saint Louis.

MAIA HIGHTOWER

EVP, Chief Digital Technology Officer, UChicago Medicine
CEO, Co-Founder, Equality AI

Fireside Chat (Implementers)

Maia Hightower, MD, MPH, MBA is the Executive Vice President and Chief Digital Technology Officer (CDTO) of the University of Chicago Medicine, and the CEO and co-Founder of Equality AI. She has held multiple C-suite positions including Chief Medical Information Officer and Chief Population Health Officer. Her executive leadership experience spans healthcare digital transformation strategy and operations, population health, and diversity, equity, and inclusion, with academic medical centers, clinically integrated networks, and accountable care organizations, and early-stage investor financed healthcare tech.

In addition to leading digital strategy and IT operations at UChicago Medicine, she leads Equality AI, an early-stage investor backed healthcare tech startup. Equality AI is on a mission to end algorithmic bias in healthcare. Data scientists are the newest members of the care team. Equality AI empowers digitally enabled care teams to achieve health equity goals through responsible AI and tools to develop algorithms that address bias, fairness, and performance. She strives to ensure that the value from digital transformation of healthcare is equitable across all stakeholders, including our most vulnerable.

Speakers

JOSEPH HOGAN

Professor and Chair, Department of Biostatistics, Brown University School of Public Health

Invited Speaker

Joseph Hogan, ScD is Professor and Chair of Biostatistics, and Carole and Lawrence Sirovich Professor of Public Health, at Brown University. He received his ScD in Biostatistics from Harvard School of Public Health under the direction of Nan Laird. His research concerns development and application of statistical methods for causal inference, missing data, and Bayesian inference for large-scale observational data, with focus in HIV/AIDS and infectious disease.

His research program includes multiple collaborative projects with AMPATH, a large HIV care program based in Eldoret, Kenya, and more recently with the Rhode Island Department of Health. Prof Hogan is Program Director for NAMBARI, an NIH-funded biostatistics training partnership between Brown and Moi University in Kenya; and serves as co-Director of the Biostatistics Core for the Providence–Boston Center for AIDS Research. He has served as advisor and consultant for the FDA, NIH, NSF and National Academies of Science. Professor Hogan is an elected Fellow of the American Statistical Association and currently serves as a Statistical Editor for the *New England Journal of Medicine.*

AYANNA HOWARD

Dean and Professor, College of Engineering, The Ohio State University

Invited Speaker

Dr. Ayanna Howard is the Dean of Engineering at The Ohio State University and Monte Ahuja Endowed Dean's Chair. Previously she was Chair of the School of Interactive Computing at the Georgia Institute of Technology. Dr. Howard's research encompasses advancements in artificial intelligence, assistive technologies, and robotics, and has resulted in over 275 peer-reviewed publications. She currently works on projects ranging from healthcare robots to developing methods to mitigate bias and trust in AI. She is a Fellow of IEEE, AAAI, AAAS, National Academy of Inventors (NAI) and American Academy of Arts and Sciences. To date, Dr. Howard's unique accomplishments have been highlighted through a number of other public recognitions, including being recognized as one of the 23 most powerful women engineers in the world by Business Insider and one of the Top 50 U.S. Women in Tech by *Forbes.* Prior to Georgia Tech, Dr. Howard was at NASA's Jet Propulsion Laboratory where she held the title of Senior Robotics Researcher and Deputy Manager in the Office of the Chief Scientist.

GRETCHEN JACKSON

Associate Professor of Pediatric Surgery, Vanderbilt University Medical Center
President, AMIA

Panelist

Gretchen Jackson, MD, PhD, FACS, FACMI, FAMIA, is vice president and scientific medical officer at Intuitive and an associate professor of surgery, pediatrics, and biomedical informatics at the Vanderbilt University Medical Center. Dr. Jackson is an internationally recognized biomedical informatician and accomplished clinical surgeon with over 30 years of contributions to informatics research, innovations in health information technologies, and surgical science. She is a president and chair of the board of directors for the American Medical Informatics Association (AMIA) and an elected fellow of the American College of Medical Informatics (FACMI) and the American Medical Informatics Association (FAMIA). She is also an elected member of the Society for University Surgeons, the Southern Surgical Association, and the American Surgical Association. Before joining Intuitive in 2022, Jackson was the chief health and science officer for IBM Watson Health and before that, Watson Health's chief science officer. Jackson earned a BS in electrical engineering, an MD, and a PhD in medical information sciences from Stanford University.

KEVIN JOHNSON

David L. Cohen University Professor of Pediatrics, Informatics, Engineering and Science Communication, University of Pennsylvania

Fireside Chat Moderator (Implementers)

Kevin B. Johnson, MD, MS, FAAP, FACMI, FAMIA, FIAHSI is the David L. Cohen University Professor of Biomedical Informatics, Computer Science, Pediatrics, and Science Communication at the University of Pennsylvania. He received his MD from Johns Hopkins and his MS in Medical Informatics from Stanford University. At Vanderbilt University Medical Center, he was Chair of the Department of Biomedical Informatics for 10 years, and Chief Informatics Officer for five years.

Dr. Johnson is an internationally respected expert in clinical informatics. His research focuses on medication safety through technology innovation, computer-based documentation and data interoperability. Johnson was among the world's first researchers to propose and demonstrate the value of text-messaging in behavior change. He has authored over 150 publications and has won dozens of awards. He was elected to the American College of Medical Informatics in 2004, The Academic Pediatric Society in 2010, the National Academy of Medicine in 2010, the International Association of Health Science Informatics in 2021, and the American Institute of Medical and Biological Engineering in 2022.

ISAAC KOHANE

Professor and Chair, Department of Biomedical Informatics, Harvard Medical School
Editor-in-Chief, *NEJM AI*

Panel Moderator

Isaac "Zak" Kohane, MD, PhD, is the inaugural chair of Harvard Medical School's Department of Biomedical Informatics, whose mission is to develop the methods, tools, and infrastructure required for a new generation of scientists and care providers to move biomedicine rapidly forward by taking advantage of the insight and precision offered by big data. Kohane develops and applies computational techniques to address disease at multiple scales, from whole health care systems to the functional genomics of neurodevelopment. He also has worked on AI applications in medicine since the 1990's, including automated ventilator control, pediatric growth monitoring, detection of domestic abuse, diagnosing autism from multimodal data, and most recently assisting clinicians using whole genome sequence and clinical histories to diagnose rare or unknown disease patients. His most urgent question is how to enable doctors to be most effective and enjoy their profession when they enter into a substantial symbiosis with machine intelligence. He is a member of the National Academy of Medicine, the American Society for Clinical Investigation and the American College of Medical Informatics.

PETER LEE

Corporate Vice President, Microsoft Research & Incubations

Keynote Speaker

Peter Lee is Corporate Vice President of Research and Incubations at Microsoft. He leads Microsoft Research and oversees the incubation of new research-powered products and lines of business. Before joining Microsoft in 2010, he was at DARPA, and from 1987 to 2008 he was a Professor at Carnegie Mellon University. Dr. Lee is a member of the National Academy of Medicine. He serves on the Boards of Directors of the Allen Institute for Artificial Intelligence, the Brotman Baty Institute for Precision Medicine, and the Kaiser Permanente Bernard J. Tyson School of Medicine. Dr. Lee served on President Obama's Commission on Enhancing National Cybersecurity, and he led several studies for PCAST and the National Academies. He has testified before both the US House Science and Technology Committee and the US Senate Commerce Committee. With Carey Goldberg and Isaac Kohane, he is a coauthor of the book, "The AI Revolution in Medicine: GPT-4 and Beyond."

XIAO LIU

Senior Clinical Research Fellow, AI and Digital Health Research, University Hospitals, Birmingham, UK

Panel Moderator

Dr. Xiao Liu is an Ophthalmologist and Clinician Scientist at the University of Birmingham and University Hospitals Birmingham NHS Foundation Trust. Her work sits at the intersection of AI/ML in health and policy and regulation. Her research goals are to ensure AI and digital health technologies are safe, effective and equitable. She led the SPIRIT-AI and CONSORT-AI initiative, international standards for reporting of AI clinical trials, and currently co-leads the STANDING Together project, which aims to tackle bias in health datasets to ensure AI benefits all. Dr. Liu has several advisory roles on AI in healthcare, including with the MHRA, NICE and The NHS AI Lab. She also serves as an organizer of the Alan Turing Institute's Special Interest Group for Clinical AI.

PATRICK LYONS

Assistant Professor of Pulmonary, Allergy, and Critical Care Medicine, Oregon Health and Science University

Deep Dive: ML in EHRs

Patrick G Lyons, MD, MSc is an intensivist and healthcare delivery scientist with expertise in predictive analytics as well as the human-centered design and implementation of health information technology. His lab focuses on data-driven innovations in recognizing, characterizing, treating, and communicating about critical illness syndromes in special populations, such as patients with cancer. He joined the Department of Medicine and the Department of Medical Informatics and Clinical Epidemiology at Oregon Health and Science University in 2022 after serving as the inaugural Medical Director of the Healthcare Innovation Lab at Washington University School of Medicine and BJC HealthCare in St. Louis.

NICKOLAS MARK

Co-Founder and Managing Partner of Intermountain Ventures

Fireside Chat (Investors)

Nickolas Mark is a highly accomplished healthcare industry leader who is deeply committed to addressing the most pressing challenges in healthcare. As the Co-Founder and Managing Partner of Intermountain Ventures, a healthcare venture capital fund, Nickolas collaborates with early-stage pioneers, creative entrepreneurs, and mission-driven organizations to drive innovation and transformation in the industry.

Prior to co-founding Intermountain Ventures, Nickolas held senior leadership positions at Polen Capital, a global investment firm with approximately $80 billion in assets under management. He also worked as a senior advisor at leading consulting firms, where he focused on executing innovation and growth-related initiatives for Fortune 500 companies and global organizations.

Nickolas has a relentless focus on making a meaningful, measurable, and positive impact in the healthcare industry. He is dedicated to partnering with innovative pioneers, creative entrepreneurs, and mission-driven organizations to drive change and address the biggest challenges in healthcare.

GENEVIEVE MELTON-MEAUX

**Professor of Surgery and Health Informatics, University of Minnesota;
Chief Analytics and Care Innovation Officer, M Health Fairview**

Panelist

Genevieve Melton-Meaux, MD, PhD, trained in computer science and mathematics at Washington University, completed medical school and surgical residency at Johns Hopkins, colorectal surgery fellowship at Cleveland Clinic, biomedical informatics fellowship at Columbia University, and a health informatics PhD at University of Minnesota. She is a Professor of Surgery and Health Informatics, Director of the Center for Learning Health System Sciences, Associate Director of the Clinical NLP-IE (Natural Language Processing-Information Extraction) Program, and Program Director for the Clinical Informatics Fellowship at the University of Minnesota. She serves as Chief Analytics and Care Innovation Officer for M Health Fairview leading data analytics, informatics, and its evidence-based care program. Her interests are clinical NLP, surgical informatics, learning health systems, and improving patient care with digital user-centric solutions. She is Chair-elect of the American Medical Informatics Association Board of Directors and Immediate Past-President and elected fellow of the American College of Medical Informatics.

MARK MICHALSKI

Worldwide Head, AWS Healthcare

Panel Moderator

Mark H. Michalski, MD leads strategic business development for Amazon Healthcare and Life Sciences. Previously, Dr. Michalski was faculty at Harvard Medical School, where he launched the Data Science Office (previously the CCDS)—a research center embedded within the Mass General Brigham provider system. The DSO launched over a dozen AI/ML solutions, and secured strategic partnerships with GE, Nvidia, Nuance, and Fuji to commercialize its technology.

Dr. Michalski has held leadership and operational roles in successful medtech companies, including Butterfly Network and Hyperfine Research. He held technical and product roles at at Google and Genentech.

Dr. Michalski completed his radiology residency training as a Holman Fellow at Yale-New Haven Hospital. He graduated with a degree in Cybernetics from the University of California at Los Angeles with multiple honors and received his medical degree from Stanford University.

ANN MWANGI

Associate Professor of Biostatistics, Moi University, Kenya

Invited Speaker

Ann Wanjiru Mwangi holds a PhD from Brown University, USA; Master's degrees (Biostatistics and Applied Statistics) from Hasselt University, Belgium; and BSc from JKUAT, Kenya. She is an Associate Professor of Biostatistics and Associate Dean in charge of Research and Innovation, Moi University Kenya. She has been a biostatistician for the Academic Model Providing Access to Health Care (AMPATH) program for the last 16 years, during which several papers have been published in peer-reviewed journals. Her research interests are in data science, causal inference, methods for addressing bias when using observational data in resource limited settings in HIV & AIDS, and chronic diseases, among others. She is a Co-Investigator on several funded grants, including a D43 & DSI training grant, an R01 to optimize HIV treatment, and an R01 on Data Science for Clinical Decision Support that aims to utilize big data to develop a clinical decision support system to improve retention and viral suppression in western Kenya, among others within AMPATH. She has extensive experience in quantitative research methods, grant writing, manuscript writing, and data analysis.

VIVEK NATARAJAN

Research Lead, Google Health AI

Panelist

Vivek Natarajan is a Research Scientist at Google Health AI advancing biomedical AI to help scale world class healthcare to everyone. Vivek is particularly interested in building large language models and multimodal foundation models for biomedical applications and leads the Google Brain moonshot behind Med-PaLM, Google's flagship medical large language model. His research also underpins several regulated medical device products under clinical trials at Google, including the NHS AI award winning breast cancer detection system Mammo Reader and the skin condition classification system DermAssist.

Vivek's research has been published in well-regarded conferences and journals including *Nature Medicine, Nature Biomedical Engineering,* NeurIPS, CVPR, ICCV and *JMLR.* Prior to Google, Vivek worked on multimodal assistant systems at Facebook AI Research and published award winning research, was granted multiple patents and deployed AI models to products at scale with hundreds of millions of users.

DAVID OUYANG

Assistant Professor and Staff Physician, Cedars-Sinai Medical Center

Panelist

David is a cardiologist and researcher in the Department of Cardiology and Division of Artificial Intelligence in Medicine at Cedars-Sinai Medical Center. As a physician-scientist and statistician with focus on cardiology and cardiovascular imaging, he works on applications of deep learning, computer vision, and the statistical analysis of large datasets within cardiovascular medicine. As a clinical echocardiographer, he works on applying deep learning for precision phenotyping in cardiac ultrasound. Additionally, he is interested in multi-modal datasets, linking EHR, ECG, echo, and MRI data for a holistic look at cardiovascular disease. He majored in statistics at Rice University, obtained an MD at UCSF, and received post-graduate medical education in internal medicine, cardiology, and a postdoc in computer science and biomedical data science at Stanford University.

ERIN PALM

Strategic Advisor, Suki AI

Panelist

Erin Palm, MD, MBA, FACS is a general surgeon, surgical intensivist, and technology product leader. She founded The Physician Company in 2022 to build software that simplifies doctors' lives. She was previously on the founding team at Suki AI, where she led Product Management for Suki's digital voice assistant for doctors. During her 5 year tenure at Suki, the company grew from a seed-stage startup to a world-class speech AI company serving thousands of doctors. Dr. Palm completed her general surgery residency at Stanford and her surgical critical care fellowship at LAC+USC Medical Center. She currently practices as a trauma surgeon at Santa Clara Valley Medical Center in San Jose, California, and teaches residents as a Clinical Assistant Professor (Affiliated) in the Stanford Department of Surgery.

Speakers

LILY PENG

Director, Product Management, Verily Life Sciences

Panelist

Dr. Peng is a physician-scientist and a director of product management at Verily, where she works on accelerating evidence generation through Verily's Clinical Studies Platforms. Before Verily, she co-led Google Health AI in applying AI to enable better and more equitable care, particularly for diabetic eye disease, cardiovascular disease, and cancer. Her resulting papers have been published in *JAMA, Nature, Nature Medicine,* and *Nature Biomedical Engineering.*

She graduated with an MD/PhD in Bioengineering from the University of California, San Francisco and a BS in Chemical Engineering from Stanford. She co-founded Nano Precision Medical, a drug delivery device start-up, and was a product manager at Doximity.

In recognition of Dr. Peng's contributions, she has been named in *Fortune Magazine's* 40 under 40 in Health, and *Wired* magazine's list of 20 People Who Are Creating the Future.

MARCO PEREZ

Associate Professor of Medicine, Stanford University

Invited Speaker

Marco Perez, MD's research goals are to better understand the causes of cardiovascular disease. His group studies the relationships between electrocardiographic markers, clinical risk factors and cardiovascular outcomes such as atrial fibrillation, heart failure and cardiovascular death. He was co-PI of the Apple Heart Study, a clinical trial using the Apple Watch to screen for atrial fibrillation and uses modern consumer devices and algorithms to predict and monitor for arrhythmic disease. He is working with other institutions on REACT-AF, a large NIH-sponsored clinical trial testing the use of a smartwatch to guide anticoagulant therapy in patients with atrial fibrillation. His laboratory uses deep learning algorithms on large electrocardiographic and imaging datasets to better predict cardiovascular disease. He has studied how to best use the electrocardiogram to identify patients at risk for cardiovascular death, atrial fibrillation and athletes at risk for life-threatening arrhythmias due to conditions such as hypertrophic cardiomyopathy. Dr. Perez receives funding from NIH/NHLBI, Apple Inc., the Weston Havens Foundation, The Stanford Cardiovascular Division and the Stanford SPARK program.

NARJES RAZAVIAN

Assistant Professor, NYU Langone Health

Invited Speaker

Narges Razavian, PhD, is an assistant professor in the Departments of Population Health and Radiology and a member of NYU Langone's Center for Healthcare Innovation and Delivery Sciences and its Predictive Analytics Unit. Her lab focuses on various core research and applications of machine learning and artificial intelligence for medicine with a clinical translation outlook. Her lab works with medical images, clinical notes, and electronic health records. She currently collaborates with NYU Langone's Alzheimer's Disease Research Center, Brain MRI and NeuroRadiology group, Pancreatic Cancer group, Lung Histopathology group, Hospitalists, and others. Before joining NYU Langone, she was a postdoc at CILVR Lab at NYU Courant Institute of Mathematical Sciences. She received her PhD at Carnegie Mellon University in the computational biology group.

NIGAM SHAH

Professor of Medicine, Stanford University
Chief Data Scientist, Stanford Healthcare

Panelist

Dr. Nigam Shah is Professor of Medicine at Stanford University, and Chief Data Scientist for Stanford Health Care. His research group analyzes multiple types of health data (EHR, Claims, Wearables, Weblogs, and Patient blogs), to answer clinical questions, generate insights, and build predictive models for the learning health system. At Stanford Healthcare, he leads artificial intelligence and data science efforts for advancing the scientific understanding of disease, improving the practice of clinical medicine and orchestrating the delivery of health care. Dr. Shah is an inventor on eight patents and patent applications, has authored over 200 scientific publications and has co-founded three companies. Dr. Shah was elected into the American College of Medical Informatics (ACMI) in 2015 and was inducted into the American Society for Clinical Investigation (ASCI) in 2016. He holds an MBBS from Baroda Medical College, India, a PhD from Penn State University and completed postdoctoral training at Stanford University.

KARANDEEP SINGH

Assistant Professor of Learning Health Sciences, University of Michigan Medical School

Deep Dive: ML in EHRs

Karandeep Singh, MD, MMSc, is an Assistant Professor of Learning Health Sciences, Internal Medicine, Urology, and Information at the University of Michigan. He directs the Machine Learning for Learning Health Systems (ML4LHS) Lab, which focuses on the development, evaluation, and implementation of machine learning models within electronic health record systems in support of a learning health system. He serves as an Associate Chief Medical Information Officer for Artificial Intelligence for Michigan Medicine and is the Associate Director for Implementation for U-M Precision Health. He completed his internal medicine residency at UCLA Medical Center, where he served as chief resident, and a nephrology fellowship in the combined Brigham and Women's Hospital/Massachusetts General Hospital program in Boston, MA. He completed his medical education at the University of Michigan Medical School and holds a master's degree in medical sciences in Biomedical Informatics from Harvard Medical School. He is board certified in internal medicine, nephrology, and clinical informatics.

BELWADI SRIKANTH

Vice President, Product Management and Design, Suki

Panelist

Belwadi Srikanth is the Vice President of Product Management and Design at Suki, currently spearheading development of the next generation of voice assistant for clinicians. Before joining the healthcare tech field, Belwadi spent over 15 years at Google, leading technology product development in search, semantic knowledge graph, and artificial Intelligence.

He also played an integral role in two startups in India, focusing on consumer products in wireless internet. Belwadi has authored over 10 granted patents in foundational technology in information retrieval systems.

He is an Industrial engineer by background with a Bachelor's degree from Bangalore University, and holds Postgraduate Diploma with a Gold medal in software enterprise management from the Indian Institute of Management, and MBA exchange from the London Business School. He is also actively involved in various non-profit organizations and educational institutions in rural and tribal parts of India.

NINA TOUSCH

Journalist and Chief Editor of *Glucose Toujours*

Keynote Speaker

Nina Tousch is an independent journalist and the chief editor of *Glucose Toujours,* the first online media on diabetes self-funded by its readers. Through her work, she advocates for the right to access information about diabetes and thus aims at bringing the world of researchers and healthcare professionals closer to the world of people living with diabetes. She masters the art of making fun of the condition to better love it and tame it. She also uses an open source algorithm that automatically delivers insulin and urges patient organizations and health authorities to recognize it as a safe and alternative system for people living with diabetes.

LAUREN WILCOX

Senior Staff Research Scientist, Google Research

Panelist

Lauren Wilcox, PhD, is Senior Staff Research Scientist in the Responsible AI and Human-Centered Technology organization in Google Research. Her team critically examines and aims to shape the social and technical processes that underpin AI technologies, through participatory, culturally-inclusive, and intersectional equity-oriented research that centers impacted communities. She brings over16 years of experience conducting human-centered computing research, most of which have been in service of human health and well-being. Wilcox also holds an adjunct associate professor position in Georgia Tech's School of Interactive Computing, where she previously directed the Health Experience & Applications Lab as a member of the faculty. Wilcox was named a Senior Member of the ACM and an inaugural member of the ACM Future of Computing Academy. She received her PhD in Computer Science from Columbia University in 2013.

KARLEY YODER

General Manager and Chief Digital Officer, Ultrasound
GE HealthCare

Panelist

Karley is the General Manager and Chief Digital Officer for GE HealthCare's $3B global Ultrasound business. In this role she is responsible for digital product innovation, commercial growth, customer collaboration, AI development, and 3rd party partnerships to accelerate the impact of digital solutions that drive clinical efficiency and enable better patient outcomes.

Previously at GEHC, she was Vice President & GM for Artificial Intelligence. In that role, she spearheaded AI strategy, product implementation, and ecosystem delivery across the full GE Healthcare product portfolio. Her team developed a healthcare-specific AI platform—Edison AI; and launched a first of its kind start-up focused program—Edison Developer Program.

With over a decade of experience focused in the digital healthcare space, Karley has held several product-related roles across the healthcare spectrum: spending time at Apple Health, leading implementations of the Affordable Care Act exchanges at the state level, providing business development strategies for Doctor On Demand, and conducting clinical and software research in the healthcare space at both Duke and Stanford Universities

Karley holds a bachelor's degree in biomedical engineering from Duke University and a Master of Business Administration from Harvard Business School.

Notes

SAIL organizers model our island casual dress code at SAIL 2022.

The SAIL Experience

Dress code is "island casual." Think jeans or shorts with a shirt, blazer/tie optional. We want everyone to be relaxed and comfortable.

Hotel amenities and discounts for SAIL guests include:

- 2 welcome drinks
- 2 bottles of water daily
- 20% discount on greens fees (book in advance, 2 PGA courses)
- 20% discount on spa services (book in advance)
- Use of tennis and pickleball courts
- Unlimited toll-free and local calls
- Complimentary Wifi in designated areas
- Trolley transportation around hotel grounds
- Reservations guaranteed for late arrival

If you have any guest(s) accompanying you and they would like to join the evening events and dinners, they need to register for SAIL 2023 via Eventbrite.

Nanny On Call PR is the third-party childcare service recommended by the hotel.

Extra-curricular Activities

To plan other aspects of your trip to Puerto Rico, or if you will be extending your stay to visit the island, **DiscoverPuertoRico.com** is a helpful website.

In addition to the onsite amenities listed above, after the program concludes you will have opportunities for sailing, bioluminescent bay tours, horseback riding, tours of Old San Juan, and other activities. Check out the **SAIL 2023 Travel page** of our website for some ideas.

Old San Juan, the oldest city in the United States.

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