Synthetic Patient Data – A Game Changer for LHS?

6th LHS Tech Forum

Dec 5, 2022, 2-3PM PST, 5-6PM EST

Forum Program:

1. Community announcement by Joshua Rubin, Esq. (1min)

2. Introduction by moderator Dr. Blackford Middleton (1min)

3. Presentation by Andy Gregorowicz: Synthea patient generator (20min)

4. Presentation by Dr. AJ Chen: LHS simulation using Synthea patient data (20min)

5. Audience Q&A (20 min)

Please post your questions in the Zoom chat window during presentations

Welcome and Community Announcement

Learning Health Community

LHS Tech Forum Initiative

Organizing Committee:

- Co-Chair: Dr. AJ Chen (LHS Consulting)
- Co-Chair: Mr. Josh Rubin (Learning Health Community)
- Dr. Sophia Wang (Stanford University)
- Dr. Tom Foley (Newcastle University)

Advisor Committee:

- Chair: Dr. Charles Friedman (University of Michigan)

http://www.learninghealth.org/2020-lhs-technology-forum

New Open LHS Resources

- ✓ Open LHS practical guide
- ✓ Open LHS synthetic data in Harvard Dataverse
- ✓ Open LHS synthetic data GitHub project

Encouraging our community to generate and share synthetic data for LHS

Thanks to Community Outreach Partners

- U. of Michigan Learning Health Sciences Department
- Stanford University
- AMIA
- University of Melbourne
- HIMSS Accelerate
- UCSF HealthHub

LHS Tech Forum

Past Forums

1. Open Challenge to Realize the Vision of Global Learning Health Systems

2. Building New Infrastructures for Global Learning Health Systems

3. The New Interoperability Regulations – Transforming to a Learning Health System

4. Transforming Clinical Research Networks to Learning Health Systems

5. How Clinical Research Platforms Can Empower Learning Health Systems

Topics Covering the Whole LHS Stack

- Application layer: AI/ML tools, Research Networks, Dissemination, Health Equity, …

- Knowledge layer: ML, KM, CBK, KG, RCT, PCT, …

- Data layer: Data standards, Interoperability, API, FHIR, UMLS, …

- Computing layer: Cloud

Moderator

Dr. Blackford Middleton's work is focused on clinical informatics – the applied science surrounding strategy, design, implementation, and evaluation of clinical information systems in clinical environments, or wherever clinical decisions are made. His overarching goal is to improve healthcare: one decision at a time. His special interests are in augmented clinical intelligence, knowledge representation and sharing, and quality measurement – all mediated through clinical information management systems (EHR, PHR, etc.). He has deep experience in team building, innovation, and leadership roles in academe and industry. He was a professor of biomedical informatics, and or of medicine, at Stanford, Harvard, and Vanderbilt Universities, and he held executive leadership roles at Stanford University Medical Center (CMIO), MedicaLogic/Medscape (CMO), Partners Healthcare System (Corporate Director, Clinical Informatics R&D; now Mass General Brigham), Vanderbilt University Medical Center (CIO/Assistant Vice Chancellor), and at Apervita (Chief Informatics & Innovation Officer).

Presentation: Synthea Patient Generator

Andy Gregorowicz has over 20 years of experience as a software engineer for MITRE. Since joining, he has applied his software and interoperability expertise to current challenges faced by the Centers for Disease Control (CDC), Department of Veterans Affairs and Health and Human Services (HHS) Office of the National Coordinator (ONC). Andy is a member of the Synthea development team, recently implementing simulation of COVID-19 Immunization and currently working on features to ease the generation of telemedicine data.

Presentation: LHS Simulation

AJ Chen, PhD is a Learning Health System technology consultant in Silicon Valley. AJ co-chairs the LHS Tech Forum Initiative at the non-profit Learning Health Community. Previously AJ co-chaired the US HHS Southwest and Pacific Region Health Equity Council and served in the Consumer Technology Workgroup of the US HHS Federal Advisory Committee on Health IT Standards. AJ won US HHS developer national challenges twice. He had developed the core semantic search technology that helped healthline.com and partners to reach 100M consumers per month. Earlier, AJ partnered with Nobel Prize winner Dr. Barry Marshall to promote disrupted medical discovery

Q&A

- Please post your questions in the Zoom chat window.
- Moderator will read questions to the speakers

Thank You!

Future forum topics

- Synthetic data
- Data-driven ML, AI
- Clinical research networks
- New knowledge generation
- Trusted and equitable LHS

Please join "Learning Health Systems " linkedin group
for forum notice and ongoing discussion
https://www.linkedin.com/groups/10532735/