AGENDA
CCTSI’s CU CSU Summit VII
AI and Machine Learning in Biomedical Research
The Westin Westminster
10600 Westminster Blvd.
Westminster, CO 80020
Wednesday, August 14, 2019

8:00 am  Breakfast

8:15 – 8:35 am  Introductions and Goals
Ronald Sokol, MD, CCTSI Director
University of Colorado Anschutz Medical Campus

Moderator: Ronald Sokol, MD

AI and Machine Learning in Biomedical Research
8:35 – 8:50 am  Introduction to Artificial Intelligence and Machine Learning
Larry Hunter, PhD
Director of the Center for Computational Pharmacology and of the
Computational Bioscience Program
University of Colorado Anschutz Medical Campus

8:50 – 9:00 am  Discussion

9:00 – 9:15 am  Ethical and Social Issues in Artificial Intelligence
Matthew DeCamp, MD, PhD
Associate Professor, Center for Bioethics and Humanities
University of Colorado Anschutz Medical Campus

9:15 – 9:25 am  Discussion

Moderator: Sue VandeWoude, DVM

Innovative Applications of AI and Machine Learning – I

9:25 – 9:40 am  Predictive Analytics for Respiratory Infections
Michael Kirby, PhD
Professor of Mathematics and Computer Science, College of Natural Sciences
Colorado State University

9:40 – 9:50 am  Discussion
9:50 – 10:05 am  
**Mining Online Data to Learn About Disease Outbreaks**  
Michael J. Paul, PhD  
Assistant Professor of Information Science, College of Media, Communication and Information  
University of Colorado Boulder  

10:05 am – 10:15 pm  
Discussion  

10:15 – 10:30 am  
**Networking/Poster Session/Coffee Break**  

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**Moderator: Michael Kahn, MD, PhD**  

**Campus Resources in AI and Machine Learning**  

10:30 – 10:40 am  
**Resources at the University of Colorado Boulder**  
Ryan Layer, PhD  
Assistant Professor, Computer Science and BioFrontiers Institute  
University of Colorado Boulder  

10:40 – 10:50 am  
**Resources at the Colorado State University**  
Shrideep Pallickara, PhD  
Professor of Computer Science, College of Natural Sciences  
Colorado State University  

10:50 – 11:00 am  
**Resources at the University of Colorado Anschutz Medical Campus**  
Tell Bennett, MD, MS  
Associate Professor of Pediatrics, School of Medicine  
University of Colorado Anschutz Medical Campus  

11:00 – 11:10 am  
**CCTSI Pilot Program**  
Thomas Campbell, MD  
Professor, Division of Infectious Diseases, CCTSI Pilot Director  
University of Colorado Anschutz Medical Campus  

11:10 – 11:20 am  
Discussion
Moderator: Wendy Kohrt, PhD

Lightning Abstract Presentations I
11:20 – 11:50 am  Lightning Talks: 3 x 5 Abstract Presentations (3 presentations of 5 minutes plus 5 minutes discussion each)

11:50 – 12:50 pm  Lunch and Poster Session/Networking

Moderator: Wendy Kohrt, PhD

Lightning Abstract Presentations II
12:50 – 1:20 pm  Lightning Talks: 3 x 5 Abstract Presentations (3 presentations of 5 minutes plus 5 minutes discussion each)

Moderator: Tell Bennett, MD, MS

The Power (and Limitations) of AI

1:20 – 1:35 pm  Application of AI and Virtual Clinicians for Treatment of Neurological Communication Disorders
Sarel Van Vuuren, PhD
Associate Research Professor, Institute of Cognitive Science
University of Colorado Boulder
1:35 – 1:40 pm  Discussion

1:40 – 1:55 pm  Why AI is Not the New Electricity
David Albers, PhD
Associate Professor of Pediatrics, School of Medicine
University of Colorado Anschutz Medical Campus
1:55 – 2:05  Discussion

Breakout Sessions
2:05 – 2:10  Walk to Your Breakout Session (Choose One)
2:10 – 2:35 pm  Breakout Sessions: Methods and Strategies for AI and Computer Learning Research

1) Deep Learning
   Debashis Ghosh, PhD
   Professor and Chair, Biostatistics and Informatics, Colorado School of Public Health
   University of Colorado Anschutz Medical Campus

2) Hands-on Machine Learning with Python
   Seth Russell, MS
   Research Analytics Instructor, Data Science to Patient Value (D2V)
   University of Colorado Anschutz Medical Campus

2:35 – 2:50 pm  Poster Session/Networking/Coffee Break

Moderator: Tell Bennett, MD, MS
Innovative Applications of AI and Machine Learning – II

2:50 – 3:05 pm  Unsupervised Learning for Studying Chronic Obstructive Pulmonary Disease
   Katerina Kechrís, PhD
   Professor of Biostatistics and Informatics
   Colorado School of Public Health
   University of Colorado Anschutz Medical Campus

3:05 – 3:15 pm  Discussion

3:15 – 3:30 pm  We Used AI to Do What Couldn’t Be Done
   Steven Moulton, MD
   Professor of Surgery, School of Medicine
   University of Colorado Anschutz Medical Campus

3:30 – 3:40 pm  Discussion

3:40 – 3:45 pm  Closing Remarks – Ronald Sokol, MD