



DEEP LEARNING SUMMIT & DEEP LEARNING IN HEALTHCARE SUMMIT

BOSTON • MAY 24 & 25

DAY 1:

08:15 REGISTRATION & LIGHT BREAKFAST

09:00 WELCOME

DEEP LEARNING SUMMIT

Room: Grand Ballroom G-L

DEEP LEARNING THEORY &
APPLICATION

09:15 - 09:35

**BPGad: Towards Global Optimality in
Deep Learning via Branch and Pruning**
Ziming Zhang, Research Scientist, MERL

@merl_news

DEEP LEARNING MODELS &
FRAMEWORKS

09:35 - 09:55

**Deeplearn.js: A Hardware Accelerated
Machine Intelligence Library for the Web**
Nikhil Thorat & Daniel Smilkov, Software
Engineers, Google Brain

@nsthorat & @dsmilkov

09:55 - 10:15

Tensor Comprehensions
William Moses, PhD Student, MIT

@MIT_CSAIL

10:15 - 10:35

**Hyperscale Deep Learning for the
Masses**
Fabio Buso, Head of Engineering, Logical
Clocks *@logicalclocks*

DL IN HEALTHCARE SUMMIT

Room: Grand Ballroom A-F

DEEP LEARNING IN HEALTHCARE: AN
INTRODUCTION

09:15 - 09:35

Machine Learning in Radiology
Amir Tahmasebi, Senior Research
Scientist, Philips Cambridge Innovation
Labs *@Philips*

AI IN DRUG DISCOVERY &
DEVELOPMENT

09:35 - 09:55

**Using AI-Guided Analytics in Early Stage
Clinical Trials**
Eric Milliman, Data Scientist, Berg

@BergHealth

09:55 - 10:15

**Accelerating High Throughput Drug
Discovery Using Deep Learning**
Yusuf Roohani, Data Scientist, GSK *@GSK*

PERSONALIZED MEDICINE AND
PRECISION DIAGNOSIS

10:15 - 10:35

**DeepVariant: Highly Accurate Genomes
With Deep Neural Networks**
Cory McLean, Sr Software Engineer,
Google Brain *@google*

REWORK

10:35 - 11:20

COFFEE

DEEP CNNs

11:20 - 11:50

Computational Photography with Deep Learning

Michael Sollami, Lead Data Scientist, Salesforce @[msollami](#)

COMPUTER VISION

11:50 - 12:20

Neural Networks for Forecasting Demand

Sergul Aydore, Machine Learning Scientist, Amazon @[sergulaydore](#)

12:20 - 13:30

LUNCH

NATURAL LANGUAGE UNDERSTANDING

13:30 - 13:50

Latent Models (Shallow and Deep) for Recommender Systems

Anoop Deoras, Lead Researcher, Netflix @[adeoras](#)

13:50 - 14:10

Transferring Knowledge From Emojis

Bjarke Felbo, Graduate Student, MIT Media Lab @[BFelbo](#)

SPEECH RECOGNITION

14:10 - 14:30

Jointly Learning to Hear and See

David Harwath, Research Scientist, MIT CSAIL @[MIT_CSAIL](#)

10:35 - 11:20

COFFEE

11:20 - 11:40

Prediction of Opioid Cessation Using Machine Learning

Jiayi Wu Cox, PhD Candidate, Boston University @[jennysixer](#)

E-HEALTH DATA

11:40 - 12:00

Deep Patient: Predict the Medical Future of Patients with Deep Learning and EHRs

Riccardo Miotto, Senior Data Scientist, Icahn School of Medicine @[mioppius](#)

NLP IN HEALTHCARE

12:00 - 12:20

DL-Based Clinical Temporal Relation Extraction

Chen Lin, Informatician, Boston Children's Hospital @[BostonChildrens](#)

12:20 - 13:30

LUNCH

13:30 - 13:50

Clinical Natural Language Processing with Deep Learning

Sadid Hasan, Senior Scientist, Philips Research @[PhilipsResearch](#)

PREDICTING PROGRESSION

13:50 - 14:10

Collecting Movement Data & Predicting Surgical Outcomes

Lukasz Kidzinski, Researcher, Stanford University @[kidzik](#)

14:10 - 14:30

Predicting Individual Physiologically Acceptable States at Discharge from a Pediatric Intensive Care Unit

David Ledbetter, Senior Data Scientist, Children's Hospital LA @[ChildrensLA](#)

RE-WORK

14:30 - 14:50

Deep Speech: Free(ing) Speech with Deep Learning

Kelly Davis, Machine Learning Researcher, Mozilla @mozilla

DEEP LEARNING IN MEDICAL IMAGING

14:30 - 14:50

Image-Based Morphological Profiling Using Deep Learning

Juan Caicedo, Postdoctoral Researcher, Broad Institute @jccaicedo

14:50 - 15:40

COFFEE

14:50 - 15:40

COFFEE

WORKSHOP - Quincy/ Heymarket, Upper Lobby

15.40-16.20 - Distributed Tensorflow: Scaling Model Training to Multiple GPUs

Neil Tenenholz, Director of Machine Learning, MGH & BWH Center for Clinical Data Science @ntenenz

GENERATIVE ADVERSARIAL NETWORKS

15:40 - 16:00

Adversarial Learning for Text-to-Image Synthesis

Miriam Cha, PhD Candidate, Harvard University @Harvard

15:40 - 16:00

From Pixels to Clinical Insight

Polina Golland, Professor, MIT CSAIL @MIT_CSAIL

DEEP LEARNING & ROBOTICS

16:00 - 16:20

Self-Supervision in Mobile Robots in the Deep Learning Era

Sudeep Pillai, Machine Learning Research Scientist at Toyota Research Institute @sudeepillai

16:00 - 16:20

Deep Learning Opportunities in Cancer Imaging

Ahmed Hosny, Data Scientist, Dana-Farber Cancer Institute @ahmedhosny

WORKSHOP - Quincy/ Heymarket, Upper Lobby

16.25 - 17:00 - The ROI of Deep Learning Applications - Is it Worth it?

Mark Homer, Director, Data Science, Aetna @marklhomer
Zac Kriegman, Senior Data Scientist, Thomson Reuters Innovation Lab @thomsonreuters

Moderator: Matthew Sutton, Advisor, Harvard Ventures @harvardventures

RE•WORK

DEEP LEARNING & SOCIETAL IMPACTS

16:20 - 17:00

PANEL: Is the Biggest Challenge Facing AI an Ethical One?

Cansu Canca, Founder/Director, AI Ethics Lab @ccansu

Gabriele Fariello, Instructor in ML & AI / CIO, Harvard University / University of Rhode Island @g_fariello

Kathy Pham, Fellow, Harvard Berkman Klein Center @kathytpham

Moderator: Simon Mueller, Co-Founder & VP, The Future Society @sim0nmueller

17:00 - 18:00 NETWORKING DRINKS

16:20 - 17:00

PANEL: The Future Of Cancer Treatment with the Application of Deep Learning

Tal Schuster, PhD Candidate, MIT CSAIL @MIT_CSAIL

Liz Asai, CEO, 3Derm @liz_asai

Ahmed Hosny, Data Scientist, Dana-Farber Cancer Institute @ahmedhosny

Moderator: Bill Lotter, CTO & Co-Founder, DeepHealth @bill_lotter

17:00 - 18:00 NETWORKING DRINKS

Networking drinks will be served from **5-6pm in the Palm Garden.**

Please take your agenda with you and bring back tomorrow to *reduce on paper use!*

Book your place at a future RE•WORK Summit in the next 2 weeks using the Alumni code: **ALUMNIMAY** for **20%**

Doors will open at **8.15am** tomorrow. *See you then!*



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DAY 2:

08:15 REGISTRATION & LIGHT BREAKFAST

09:00 WELCOME

DEEP LEARNING SUMMIT

Room: Grand Ballroom G-L

STARTUP SESSION

09:15 - 09:35

The Matrix - Programmable Matter

Bill Aronson, CEO, AI Research Group

09:35 - 09:55

Using Deep Learning to Generate and Assess Natural Language

Neil Yager, Chief Scientist, Phrasee

[@phrasee](#)

09:55 - 10:15

What Can We Learn from Slack Data about Human Collaboration Using NLP and Research in Psychology?

Charles Ahmadzadeh, Co-Founder & Engineering, Bunch.ai

[@superzadeh](#)

10:15 - 10:35

Engineering Common Sense

Yibiao Zhao, Co-Founder & CEO, iSee

[@iSee_AI](#)

10:35 - 11:20

COFFEE

DL IN HEALTHCARE SUMMIT

Room: Grand Ballroom A-F

STARTUP SESSION

09:15 - 09:35

Programming Living Organisms Through Targeted Machine Learning

Joe Isaacson, VP of Engineering, Asimov

[@Jisaacso](#)

09:35 - 09:55

Building the Patient Tensor: The Total Is More Than the Sum of Its Parts

Fernando Schwartz, Chief Data Scientist, Prognos

[@prognosAI](#)

09:55 - 10:15

Lifestyle-Based Human Health and Well Being, from Knowledge Representation to Knowledge Generation

Victor Chapela, Co-founder & CEO & Ricardo Corral, Chief Data Scientist, Suggestic

[@VChapela](#) & [@Suggestic](#)

10:15 - 10:35

Deep Learning in the Health Record: Discovering Meaning in Clinical Text

Mayur Saxena, CEO & Tasha Nagamine, Chief of AI, Droice Labs

[@DroiceLabs](#)

10:35 - 11:20

COFFEE

APPLICATIONS OF DEEP LEARNING IN INDUSTRY

11:20 - 11:40

Deep User-History Aggregates With Application to Twitter Timelines Ranking

Jeshua Bratman, Staff Engineer, Twitter
Cortex [@Twitter](#)

11:40 - 12:00

The Path to a Personalized, On-Device Virtual Assistant

Chris Lott, Senior Director of Engineering, Qualcomm Technologies
[@Qualcomm](#)

12:00 - 12:30

PANEL: How Can You Redefine Your Industry With the Application of Deep Learning?

Tom Wilde, CEO, indico [@tomrwilde](#)
David Nydam, CEO, BIA
Sumedh Mehta, CIO, Putnam Investments [@sumedhMehta](#)
Moderator: Aditya Kaul, Research Director, Tractica [@kaulout](#)

12:30 - 13:40

LUNCH

APPLICATIONS OF DEEP LEARNING IN HEALTHCARE

11:20 - 11:40

Machine Learning in the Healthcare Enterprise

Mark Michalski, Executive Director, MGH & BWH Center for Clinical Data Science
[@MarkHMichalski](#)

11:40 - 12:00

Lung Cancer Detection and Segmentation Using Deep Learning

Daniel Golden, Director of Machine Learning, Arterys [@ArterysInc](#)

12:00 - 12:20

Using Machine Learning to Improve Care of Chronically Ill Patients

Tommy Blanchard, Data Science Lead, Fresenius Medical Care
[@TommyCBlanchard](#)

12:20 - 13:30

LUNCH

WORKSHOP - Quincy/Heymarket, Upper Lobby

13.40-14.15 - Your Future in Deep Learning

Rachita Chandra, Solutions Architect, IBM Watson Health [@IBMWatsonHealth](#)

13:40 - 14:00

Improving TripAdvisor Photo Selection With Deep Learning

Greg Amis, Principal Software Engineer, TripAdvisor @ [TripAdvisor](#)

14:00 - 14:20

Geometric Deep Learning in Multigraphs for Movie Recommender Systems

Miguel Campo, SVP of Data Science & Analytics, Twentieth Century Fox Film @ [20thcenturyfox](#)

13:30 - 13:50

Developing Deep Learning-Based Solutions for Radiology

David Richmond, Senior Scientist, IBM Watson Health @ [IBMWatsonHealth](#)

13:50 - 14:10

Detecting Mobility Functions in Free Text as an Indicator of Disability

Ayah Zirikly, Postdoctoral Fellow, The National Institute of Health @ [NIH](#)

WORKSHOP - Quincy/ Heymarket, Upper Lobby

14.20-15:00 - Your Future in Deep Learning

Hyuk-Jeen Suh, Head, Samsung Ventures @ [hyukjeen](#)

Matthew Sutton, Advisor, Harvard Ventures @ [harvardventures](#)

Daniel Golden, Director of Machine Learning, Arterys @ [ArterysInc](#)

14:20 - 14:40

Deep Learning Architectures for Large-Scale Online Payments Fraud Detection

Nitin Sharma, Distinguished Scientist, PayPal @ [PayPal](#)

14:10 - 14:30

Early Detection of Alzheimer's Disease with Deep Learning

Ayin Vala, Co-Founder & Chief Data Scientist, Foundation for Precision Medicine

14:40 - 15:00

Using Deep Learning to Detect Anomalies in Time Series Data

Narine Kokhlikyan, Machine Learning Engineer, Slice Technologies @ [HelloSlice](#)

14:30 - 15:00

PANEL: How to Balance Ethics and Efficiency When Applying AI in Healthcare

Dekel Gelbman, CEO, FDNA @ [fdna](#)
Cansu Canca, Founder/Director, AI Ethics Lab @ [ccansu](#)
Adrian Gropper, CTO, Patient Privacy Rights @ [agropper](#)

Moderator: Wen Dombrowski, Chief Convergence Officer, CATALAIZE @ [HealthcareWen](#)

15:00 END OF SUMMIT

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