

**Advances in Imaging and Machine Learning:  
Medical, VR-AR, and Self-Driving Cars  
July 13-14, 2020**

<b>Monday</b>	<b>Advances in Imaging</b>
9:30-10:00 am	Intro to Advances in Imaging and fast forward
10:00am-12:30 pm	Infrared, thermal imaging, millimeter wave, terahertz, thermal cameras, multi-spectral, high-speed cameras, and 3D range-sensing time-of-flight cameras and camera arrays, visual analysis and scene understanding
12:30-1:30 pm	Lunch on your own
1:30-3:00 pm	Overview of computational imaging for self-driving car industry LIDAR, RADAR and sensors
3:00-4:00 pm	Landscape of current AR-VR challenges Explore current technologies: Oculus Rift, Meta, Hololens Computer Vision for Augmented Reality and Gestural Interactions
4:00-5:00pm	Landscape Medical imaging, Diagnostics, Optics and sensors for health, CT, MRI, visualization and predictive analytics
5:00-7:00 pm	Group Dinner with members of the Camera Culture group and alums
<b>Tuesday</b>	<b>AI and Machine Learning Deep Dive</b>
9:30 am-11am	Introduction to machine learning, clustering and classification, introduction to compressive sensing and sparse representations, internet vision and online photo collections
11am-1:00 pm	Hands-on Activity: Dive into DNN
1:00-2:00 pm	Lunch at the MIT Media Lab
2:00-3:15 pm	Computer Vision: Low-level image features, and analysis; mid-level and high level, shape recovery, object recognition, and new applications for CV using machine learning



3:15-5:00 pm	Future products and services, defining questions that span technology, application, social impact and business opportunity: Team exercise to brainstorm emerging sectors and applications, followed by short team presentations
6:00pm-8:00pm	Imaging Café event with 20 Imaging startups in Boston area (Optional Event: Opportunity for participants to present their own work in the audience) Imaging Café is a monthly event bringing together researchers, engineers, and students to foster deeper conversation with entrepreneurs, mentors and investors. This gathering is for people excited about mobile camera phones, cameras in developing countries, image-search, medical imaging, online photo sharing, home automation, computational photography, 3D printing and more.

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