Deep Learning for AI and Computer Vision  
July 29-August 1, 2019  
Instructors: Prof. Antonio Torralba, Prof. Phillip Isola

Day One:
9:00am: Introduction to computer vision (Torralba)  
10:00am: Cameras and image formation (Torralba)  
11:00am: Coffee break  
11:15am: Introduction to machine learning (Isola)  
12:15pm: Lunch (provided)  
1:30pm: The problem of generalization (Isola)  
2:30pm: Neural networks (Isola)  
3:30pm: Coffee break  
3:45pm: Tutorial on Pytorch part 1  
5:00pm: Adjourn

Day Two:
9:00am: Filters, pyramids, and CNNs (Torralba)  
10:00am: Stochastic gradient descent (Torralba)  
11:00am: Coffee break  
11:15am: SGD exercise  
12:15pm: Lunch break (on your own)  
1:30pm: Representation learning (Isola)  
2:30pm: Temporal processing and RNNs (Isola)  
3:30pm: Coffee break  
3:45pm: Tutorial on Pytorch part 2  
5:00pm: Adjourn
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**Day Three:**
9:00am: Multiview geometry (Torralba)
10:00am: 3D deep learning (Torralba)
11:00am: Coffee break
11:15am: Scene understanding (Torralba)
12:15pm: Lunch break (on your own)
1:30pm: Vision and language (Isola)
2:30pm: Image synthesis and generative models part 1 (Isola)
3:30pm: Coffee break
3:45pm: Lab exercise
5:00pm: Adjourn

**Day Four:**
9:00am: Image synthesis and generative models part 2 (Isola)
10:00am: Vision for embodied agents part 1 (Isola)
11:00am: Coffee break
11:15am: Vision for embodied agents part 2 (Isola)
12:15pm: Lunch break (on your own)
1:30pm: Datasets, bias, and adaptation (Torralba)
2:30pm: Robustness and security (Torralba)
3:30pm: Coffee break
3:45pm: Practical tips and closing remarks
5:00pm: Adjourn