

Brains, Minds and Machines Summer Course 2019														
			Morning						Afternoon					
MBL Rooms Reserved			9:15 - 10:30	10:30 - 10:45	10:45 - 12:00	12:00 - 1:30	1:30 - 2:45	2:45 - 3:00	3:00 - 4:30	4:30 - 6:00	6:00 -- 8:00	8:00 - 9:00	9pm on	LEGEND
	Aug-8	Thurs	Student/staff move in							Reception: 5pm Swope Terrace				Lecture
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-9	Friday	Tommy Poggio: Introduction to CBMM Gabriel Kreiman: Introduction to the summer course	BREAK	Student introductions	LUNCH	MBL Orientation [45 minutes] Student introductions	BREAK	TA introductions and contact info	Project introductions	Dinner	Project introductions	Project introductions	Seminar Talk: Lillie Auditorium
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-10	Sat	Christof Koch: Integrated theory of consciousness	BREAK	Tutorial: Math & programming office hours	LUNCH	Tutorial: Statistics and data analysis	BREAK	Tutorial: Basic Neuroscience	Tutorial: Deep learning	Dinner	NOTE: 7PM: Massey lecture: Christof Koch: The Diversity of Cell Types in the Human Brain (MCN/CBMM cohosted talk)	MBL to host reception in Meigs Room	Seminar Talk
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-11	Sun	Christof Koch: Brain observatory	BREAK	Michael Buiuc: Computational models of mouse visual cortex and tutorial on Allen Institute Data Observatory	LUNCH	Tutorial: RL	BREAK	Tutorial: Computer vision overview	Tutorial: Deep learning hands on	Dinner	Tutorial: Experimental design	Project discussion	Panel Discussion
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-12	Mon	Tutorial: Neuroscience data analysis	BREAK	Tutorial: Neuroscience data analysis	LUNCH	Gabriel Kreiman: Recurrent computations in cortex	BREAK	Jim DiCarlo: Visual recognition in primates	Tutorial: RL hands on	Dinner	Tutorial: Computational modeling of primate vision	Project discussion	Tutorial (Loeb 306)
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-13	Tues	Lorenzo Rosasco: Machine learning 1	BREAK	Lorenzo Rosasco: Machine learning 2	LUNCH	Alexander Rakhlin: How to learn with streaming data	BREAK	Lorenzo Rosasco: Machine Learning [?]	Lorenzo Rosasco: Machine Learning [?]	Dinner	Jeff Lichtman: Connectomics At The Nano- and Petascale	Swope Terrace	Project (Loeb 306)
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-14	Wed	Marge Livingstone: Functional Modules: what good are they and how do we get them?	BREAK	Tomaso Poggio: A theory of deep learning: explaining the approximation, optimization and generalization puzzles	LUNCH	Project work time	BREAK	Beach party	Beach party	Dinner	*X [Google X] Happy Hour* 7pm, 41-70 Restaurant	Project work time	Social (location TBD)
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-15	Thurs	Josh Tenenbaum: Computational models of cognition	BREAK	Josh Tenenbaum: Computational models of cognition	LUNCH	Bob Desimone: Visual attention	BREAK	Tensorflow Tutorial [Josh Gordon]	Tensorflow Tutorial [Josh Gordon]	Dinner	Pietro Perona: TBD; Lillie Auditorium	MBL Club	Activity
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-16	Friday	Probabilistic programming tutorial	BREAK	Lisa Amini (IBM)	LUNCH	Industry afternoon: Hiromichi Kobashi (Fujitsu)	BREAK	Mondira Pant (Intel)	Project work time [T-shirt designs due by 5PM]	Dinner	Industry evening: Phil Nelson (Google), TBD; Lillie Auditorium	Swope Terrace	

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Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-17 Sat	<u>Julian Jara-Ettinger:</u>	BREAK	<u>Winrich Freiwald: Faces and social interactions.</u>	LUNCH	<u>Nancy Kanwisher: functional specificity of the human brain.</u>	BREAK	<u>Dorin Comaniciu: Shaping the Future through Innovations: Artificial Intelligence for Healthcare</u>	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-18 Sun	Project work time [day of Falmouth Road Race; main roads will be closed @ 9am-12noon]	BREAK	Project work time	LUNCH	Project work time				Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-19 Mon	<u>Matt Wilson: Hippocampal mechanisms of memory and cognition</u>	BREAK	<u>Gabriel Kreiman: Memory in humans</u>	LUNCH	<u>Haim Sompolinsky: Computational Neuroscience</u>	BREAK	<u>Thomas Serre: What are the computations underlying primate versus machine vision?</u>	Discussion Panel: The Ethics of Artificial Intelligence. Matt Wilson	Dinner	Reverse Debate	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-20 Tues	Martha's Vineyard Trip							Return from Martha's Vineyard	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-21 Wed	Project work time	BREAK	Project work time	LUNCH	Project work time	BREAK	Project work time	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-22 Thurs	<u>Andrei Barbu: Vision + Language</u>	BREAK	<u>Stefanie Tellex: Robotics</u>	LUNCH	<u>Nick Roy: Robotics</u>	BREAK	<u>Pawan Sinha: TBD</u>	Discussion Panel: alumni + industry panel	Dinner	Project work time	?	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-23 Friday	Project work time	BREAK	Project work time	LUNCH	Project work time	BREAK	Project work time	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-24 Sat	Team Challenge - Boats?	BREAK	Team Challenge [Location?]	LUNCH	<u>Josh McDermott: Auditory Scene Analysis.</u>	BREAK	<u>Boris Katz & Tal Linzen: AI / Language 2.</u>	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-25 Sun	<u>Sam Gershman: Structure learning and the growth of knowledge.</u>	BREAK	<u>Liz Spelke: Development 2.</u>	LUNCH	Project work time	BREAK	<u>Jeremy Wolfe: OMG, I did not see that! The science of missing what is right in front of your eyes.</u>	Project work time	Dinner	Project work time	Project work time	

