	Brains, Minds and Machines Summer Course 2024							Italics = invited		Underlined = confirmed							
				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 - 4:15	4:30 - 6:00	6:00 -- 8:00	8:00 - 9:00	9pm on		**LEGEND**	
	Aug-4	Sunday		Student/staff move in								Dinner				Lecture	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-5	Monday		MBL Orientation [45 minutes]	BREAK	Tommy Poggio + Gabriel Kreiman: Introduction to BMM and the summer course	LUNCH	TA introductions and contact info	BREAK	Student introductions	Student introductions	Welcome reception 6p Swope Lower Terrace	Project introductions	Project introductions		Seminar Talk: Lillie Auditorium	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-6	Tuesday		Tutorial: Tutorial: Introduction to Neuroscience (Hector)	BREAK	Tutorial: Intro to Deep learning (Morgan)	LUNCH	Tutorial: Deep learning hands on (Colin)	BREAK	Tutorial: Statistics and Data Analysis (Colin)	Tutorial: High-Throughput, Brain & Behavioral Benchmarking - DeepJuice (Colin)	Dinner	Project introductions	Project introductions		Seminar Talk	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-7	Wednesday		Jim DiCarlo: Visual recognition in primates	BREAK	Jim DiCarlo: Visual recognition in primates	LUNCH	Tutorial: Computational models of primate vision (Ko)	BREAK	Tutorial: Psychophysics (Ko)	Tutorial: Practical Machine Learning Methodology (Chris, Morgan)	Dinner	Jeff Lichtman: Connectomics At The Nano- and Petascale	Reception @ Swope Upper Terrace		Panel Discussion	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-8	Thursday		Gabriel Kreiman: The brain's operating system	BREAK	Gabriel Kreiman: The brain's operating system	LUNCH	Tutorial: Diffusion models (David)	BREAK	Tutorial: Computer Vision Overview (Mengmi)	Tutorial: Continual Learning (Mengmi)	Dinner	Project discussion	Project discussion		Tutorial (Loeb 108)	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-9	Friday		Tutorial: Computational models of visual attention (Lucia, Mengmi)	BREAK	Tutorial: Computational models of language (Emily)	LUNCH	Tutorial: ThreeDWorld and Virtual Reality (Aryan)	BREAK	Marge Livingstone: What art can tell us about the brain [Zoom]	Tutorial: Reinforcement Learning (Yen-Ling)	Dinner	Project discussion	Project work time		Project (Loeb 108)	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-10	Saturday	**Theory Workshop**	Tomaso Poggio: Welcome + the computable math of learning	*BREAK*	Eran Malach: Computational Feasibility of Artificial Human-Level Intelligence	LUNCH	Tomer Galanti: SGD Provably Induces a Low-Rank Bias in Deep Neural Networks	BREAK	Santosh Vempala: Emergent Computation and Learning with Assemblies of Neurons	Panel Discussion chaired by Brian Cheung: Open Problems in the Theory of Deep Learning	Dinner	Project work time	Project work time		Social (location TBD)	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-11	Sunday	**Theory Workshop**	Pierfrancesco Beneventano: Towards Understanding the Implicit Regularization Effect of SGD	BREAK	Jacob Andreas: Language Models as World Models?	LUNCH	Akshay Rangamani: Understanding Deep Classifiers through Neural Collapse	BREAK	Phillip Isola: The Platonic Representation Hypothesis	Project work time	Dinner	Project work time	Reception @ Swope Upper Terrace		Activity	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-12	Monday		Matt Wilson: Hippocampal mechanisms of memory and cognition	BREAK	Matt Wilson: Hippocampal mechanisms of memory and cognition	LUNCH	Ethics discussion	BREAK	Saskia DeVries: Neural data observatories	Emery Brown: Deciphering the Dynamics of the Unconscious Brain Under General Anesthesia [zoom]	Dinner	Project work time	Project work time		Zoom Talk	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-13	Tuesday	**Embodied AI Workshop**	Vikash Mansinghka: Navigation and mapping with Gen	BREAK	Leslie Kaelbling: Planning for robot manipulation	LUNCH	Stefanie Tellex: Robotics	Stefanie Tellex: Robotics	Vikash Mansinghka: Supervised lab exercises on navigation and mapping with Gen	Project work time	Dinner	Project work time	Project work time			
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-14	Wednesd	**Embodied AI Workshop**	Josh Tenenbaum: Cognitive models of physical reasoning	BREAK	Vikash Mansinghka: Spiking neural network implementations	LUNCH	Leslie Kaelbling: Integrating learning and planning for robots	BREAK	Leslie Kaelbling: Supervised lab exercises on planning and learning	High-Throughput Brain + Behavioral Benchmarking (Colin)	Dinner	Project work time	Project work time			
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-15	Thursday		Project work time	BREAK	Project work time	LUNCH	Haim Sompolinsky: Computational Neuroscience	BREAK	Thomas Serre: What are the computations underlying primate versus machine vision?	Winrich Freiwald: Faces and social interactions	Dinner	Project work time	Project work time			
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-16	Friday		Andrei Barbu and Boris Katz: Language	BREAK	Andrei Barbu and Boris Katz: Language	LUNCH	Project work time	BREAK	Project work time	Project work time	Dinner	Project work time	Watch Bioluminescence (Stony beach)			

	Brains, Minds and Machines Summer Course 2024						Italics = invited		Underlined = confirmed					
			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 - 4:15	4:30 - 6:00	6:00 -- 8:00	8:00 - 9:00	9pm on	**LEGEND**
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-17	Saturday	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-18	Sunday *Falmouth Foot Race	Nancy Kanwisher: functional specificity of the human brain	BREAK	Nancy Kanwisher: functional specificity of the human brain	LUNCH	Project work time	BREAK	Project work time	Sam Gershman	Dinner	Movie Night (Speck Auditorium)	Movie Night (Speck Auditorium)	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-19	Monday	Martha's Vineyard Trip							Return from Martha's Vineyeard	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-20	Tuesday	Team Challenge - Boat building (tent ouside Loeb, Ko and Morgan are in charge)	BREAK	Team Challenge - Boat building (tent ouside Loeb)	LUNCH (venue: tent outside Loeb)	Team Challenge - Boat competition (Stony beach)	BREAK	Team Challenge - Boat competition (Stony beach)	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-21	Wednesday	*Alumni Day: Adam Yaari, Kohitij Kar, Candace Ross*	BREAK	*Alumni Day: Anna Leshinskaya, Yen-Ling Kuo*	LUNCH Swope Terra	*Alumni Day: Carlos Ponce, Bill Lotter*	BREAK	*Alumni Day: Hanlin Tang, Sue Yeon, followed by Q&A panel with all alumin*	Discussions on magic, opportunities, challenges, and failures of LLMs (Loeb)	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-22	Thursday	Gemma Boat trip - 1; **the boat trip starts at 9:15am**	BREAK	Josh McDermott	LUNCH	Gemma Boat trip - 2; **the boat trip starts at 1:15pm** instead of 1:30pm	BREAK	*Daniela Rus*	Project work time	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-23	Friday	Student Presentations	BREAK	Student Presentations	LUNCH	Student Presentations	BREAK	Student Presentations	Student Presentations	Dinner	Project work time	Project work time	
Lecture: Lillie (9AM-5:30PM) Main Lab: Loeb 306 Kitchen: Loeb 302	Aug-24	Saturday	Student Presentations	BREAK	Student Presentations	LUNCH	Student Presentations	BREAK	Student Presentations	Student Presentations	Closing Reception 6-9pm Swope Upper Terrace			
	Aug-25	Sunday	Student/Staff Move out		Bike pickup 11am									