

“QAIOT Course” – August 2023 (Find us : [Link](#))

Quantum Machine Learning with PennyLane: Introductory Course		
	Date	Content
Week 1	Sunday Aug. 13th (22 Mordad)	First Part: <ul style="list-style-type: none"> • Introduction to Machine Learning • Supervised Learning • Quantum Machine Learning Outlook Second Part; <ul style="list-style-type: none"> • Quantum Operators • Measurements • Quantum Circuits
	Tuesday August 15th (24 Mordad)	First Part: <ul style="list-style-type: none"> • Gradient & Training Second Part: <ul style="list-style-type: none"> • State Preparation • Data Representation (for Quantum Computers)
	Thursday August 17th (26 Mordad)	Lab Session: Hands-on Coding
	Programming Assignment 1 (Deadline August 24th)	
Week 2	Sunday August 20th (29 Mordad)	First Part <ul style="list-style-type: none"> • Approximate Time Evolution • Intro to Quantum Approximation Optimization Algorithm (QAOA) Second Part <ul style="list-style-type: none"> • Ansatzs
	Tuesday August 22th (31 Mordad)	First Part <ul style="list-style-type: none"> • State Vector Machines (SVM) • Kernel Function • Quantum-inspired SVM Second Part <ul style="list-style-type: none"> • Quantum Variational Classifier
	Thursday August 24th (2 Shahrivar)	Lab Session: Hands-on Coding
	Programming Assignment 2 (Deadline August 31th)	
Week 3	August 25th to August 31th	Guest Speakers (4-6 Lectures) Details To Be Announced