

ML IN QUANTUM SCIENCES

FORM OF TRAINING DATA

UNSUPERVISED LEARNING

sec. 3.2, 3.4, 7.2

SUPERVISED LEARNING

sec. 3.3, 4.5, 7.3

REINFORCEMENT LEARNING

ch. 6



MECHANICS OF ML

BIAS-VARIANCE TRADE-OFF

sec. 2.2

INTERPRETABILITY

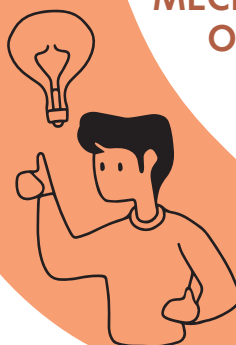
sec. 3.5

AUTOMATIC DIFFERENTIATION

sec. 7.1

STATISTICAL PHYSICS FOR ML

sec. 8.1



TASK



CLASSIFICATION

ch. 3, sec. 4.2.2

REGRESSION

ch. 4, sec. 7.3.2

GENERATIVE PROBLEMS

sec. 7.2

DENSITY ESTIMATION

sec. 7.2

ARCHITECTURE



CLASSICAL

CNN

sec. 2.4.4, 3.3, 3.5.2

NF

sec. 7.2.1

RNN

sec. 2.4.6, 5.2.2

KERNEL METHODS

ch. 4

AE

sec. 2.4.5, 3.4.1

APPLICATION



QUANTUM CHEMISTRY

sec. 4.5

QUANTUM EXPERIMENTS

OPTIMIZATION AND SPEED-UP

sec. 6.6.3, 7.3.1

HAMILTONIAN LEARNING

sec. 7.3.2

QUANTUM TOMOGRAPHY

sec. 5.3.7

QUANTUM COMPUTING

sec. 6.6.4 - 6.6.5

REPRESENTATION OF QUANTUM STATES

ch. 5

PHASE CLASSIFICATION

ch. 3