

Data Science 2019-2020 time table								
Weeks	Week44 (28.10-3.11)	Week45 (4.10-10.11)	Week46 (11.11-17.11)	Week47 (18.11-24.11)	Week48 (25.11-1.12)	Week49 (2.12-8.12)	Week50 (9.12-15.12)	Week51 (16.12-22.12)
Lecture	No Lecture	Final Project and peer review instruction	—	Support for final project	Guest lectures: 1) Juuso Parkkinen (senior Data Scientist at Nightingale Health): "How to prepare for a career in data science" 2) Ricardo Perez Falcon "Data science for music and sound"	Guest Lecture: Nico Rotstein (Kodit): "Real estate and AI" Support for Final project		
	Intro and course practicalities Model and learning Data matrix Feature extraction Frequency spectrum Frequency filtering	Probability distributions Estimation theory Maximum likelihood estimation Bayesian estimation Regression fitting Regression with maximum likelihood classification Bayes classifier	Motivation for Data Science Supervised learning Pattern region and discriminant functions K-nearest neighbors	Curse of dimensionality Supervised vs unsupervised Hierarchical clustering k-means Principal Component Analysis	Discrete patterns Frequent itemsets level-wise algorithm Hubs and authorities Page rank	Recap		
Demo Session	No session	Convolution filter Filtering in the frequency domain Fourier transform Substring histogram	Maximum likelihood estimation Bayesian estimation Maximum likelihood regression Bayesian regression Bayesian classifier	High-dimensional spaces PCA KNN	Cluster analysis	Frequent item set Level wise algorithm Hubs and authority		
Computer exercise	Intro to markdown Intro to python	Convolution Sum Sound processing Text as vector	Maximum likelihood Least square method Bayesian classifier	Classification	Standardization normalization PCA Kmean Hierarchical clustering	Page rank Authority and hub Aprior algorithm		
Mycourses Quizzes	Quiz 1 (open on 28.10): Data as a vector and matrix Audio Signals	Quiz 2 (open on 4.11): Bayesian classifier Regression with ML	Quiz 3 (open on 11.11): Bayesian classifier KNN	Quiz 4 (open on 18.11) PCA Kmean Hierarchical clustering	Quiz 5 (open on 25.11) Hubs and authority Page rank			
		Closing of Quiz 1 on 10.11 at midnight	Closing of Quiz 2 on 17.11 at midnight	closing of the Quiz 3 on 24.11 at the midnight	closing of the Quiz 4 on 1.12 at midnight	closing of the Quiz 5 on 8.12 at the midnight		
Final Project	Releasing of the final projects: 04.11	—	—	—	—	final project's report deadline: 2.12 at midnight	Peer review deadline	flagging deadline 16.12 at midnight releasing grades: 20.12

Data Science 2019 time table