

# DS 644 Exam review sheet

1. Dot products, Euclidean distance, L2 norm
2. Linear vs non-linear data
3. Least squares objective
4. Gradient descent algorithm for least squares objective
5. Concept of margin of classifier
6. Hinge (SVM) objective
7. Effect of outliers on least squares vs SVM
8. Multiclass classification
9. One hot encoding for categorical variables
10. Cross validation, balanced accuracy
11. Back propagation algorithm
12. Big data model training – Stochastic gradient descent
13. Big data model training – Adaptive learning rates
14. Big data model training – Transfer learning
15. Big data visualization – Principal component analysis
16. Big data unsupervised analysis – K-means