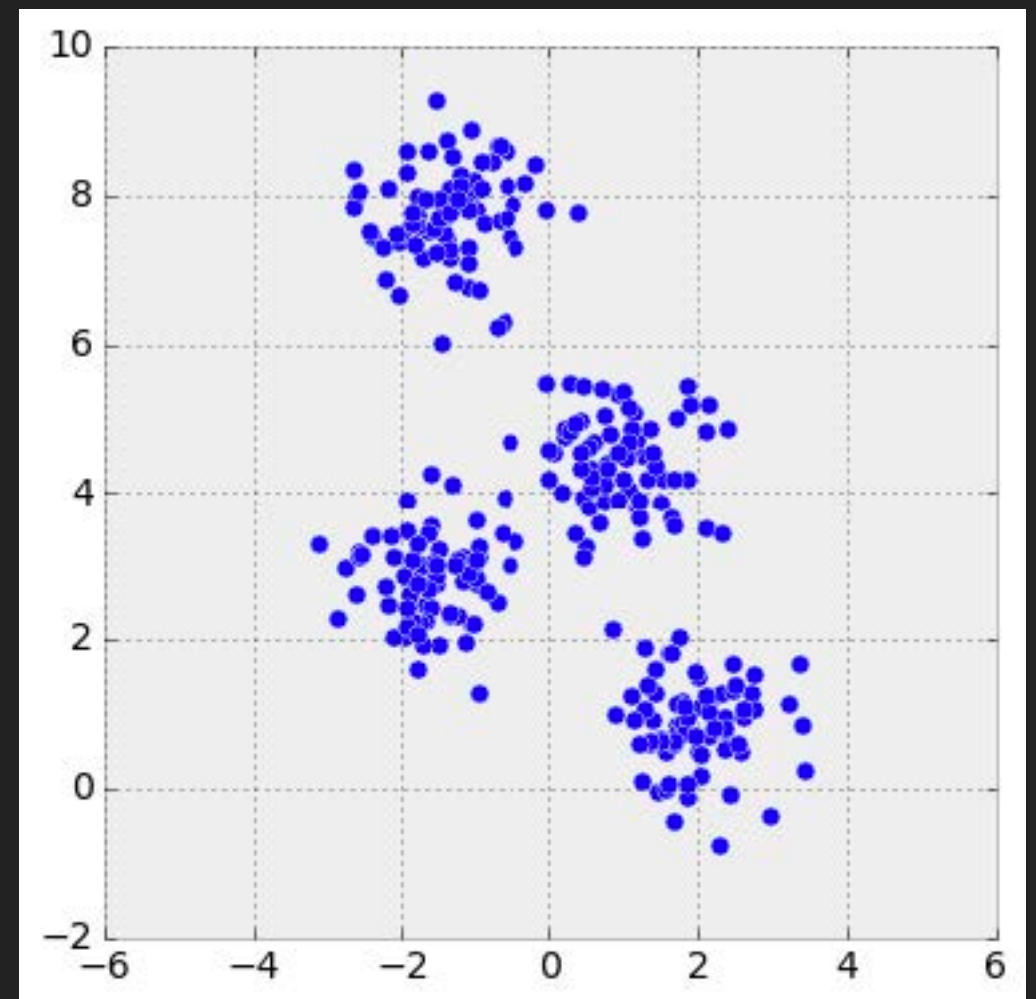


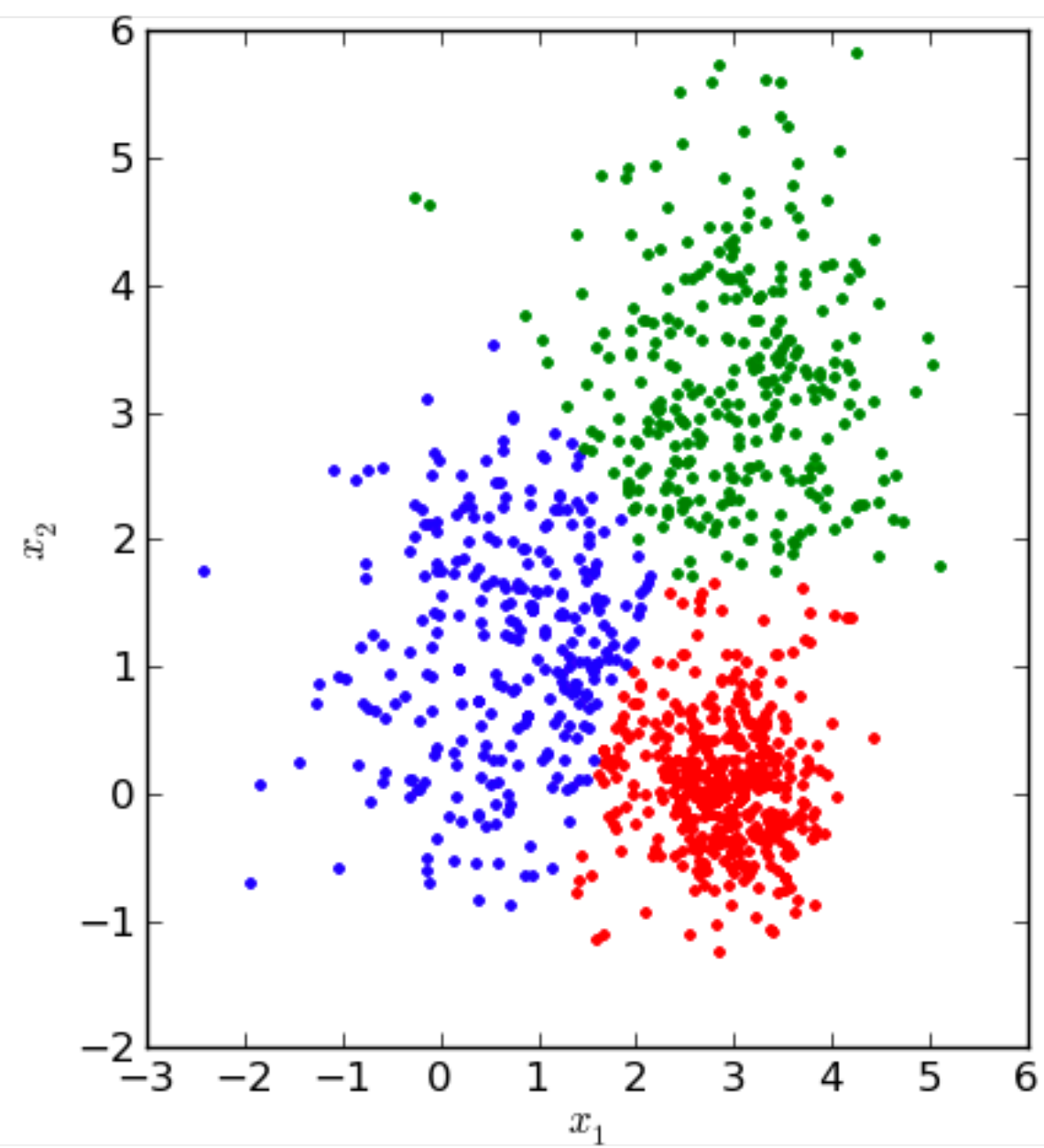
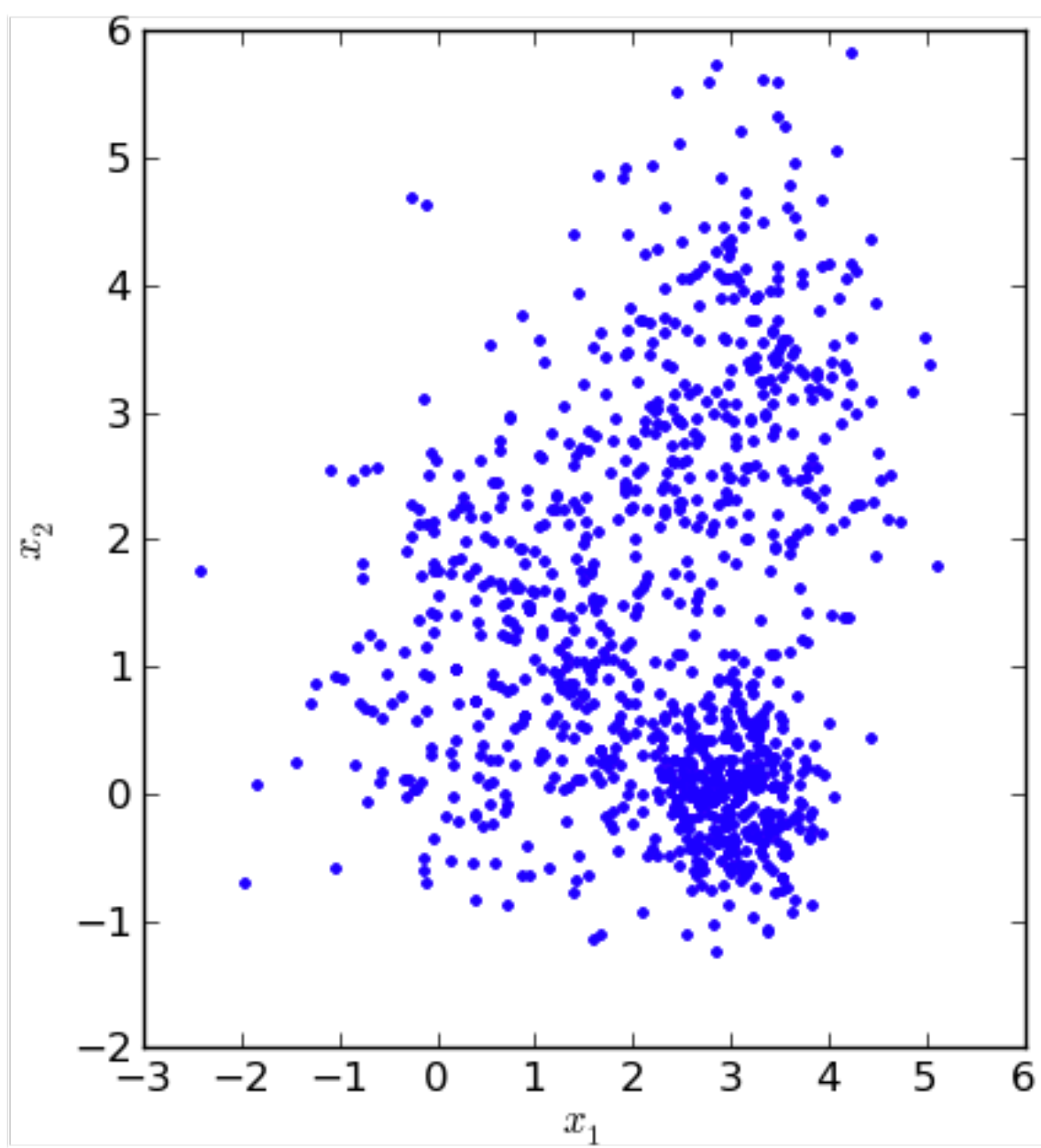
# UNSUPERVISED LEARNING

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# DEFINITION

- ▶ No labels
- ▶ Rely on our 'prior' knowledge (upto some extent)
- ▶ Some Structure
- ▶ Hidden patterns, analysing features





## SOME ALGORITHMS

- ▶ K-means Clustering
- ▶ Hierarchical Clustering
- ▶ DBSCAN
- ▶ Expectation - Maximisation algorithm
- ▶ Generative Adversarial Networks

## K – MEANS CLUSTERING

- ▶  $D = [x_1, x_2, \dots, x_n]$ ,  $k$  centers
- ▶ Cost function  $J$
- ▶ Minimisation technique