1. **Introduction** (10 minutes)

Pre-recorded introduction video that includes general overview of machine learning

1. **Breakout discussion I** (5 minutes)

General questions about tutorial, packages, and machine learning concepts

1. **Tutorial – Data Exploration & Supervised Machine Learning** (25 minutes)

Pre-recorded video introducing dataset

Pre-recorded video outlining supervised machine learning and detailing 2 approaches

Example code for supervised ML approaches

Interactive “try it yourself” code examples

Example solutions provided as separate R files

1. **Break** (5 minutes)
2. **Tutorial – Unsupervised Machine Learning** (20 minutes)

Pre-recorded video outlining unsupervised machine learning and detailing 2 approaches

Example code for unsupervised ML approaches

Interactive “try it yourself” code examples

Example solutions provided as separate R files

1. **Conclusion** (5 minutes)

Pre-recorded conclusion video that summarizes how these tools can be used

Caveats and information for learning more included

1. **Breakout discussion II** (10 minutes)

General questions

**List of pre-recorded videos**

1. Introduction
2. Dataset exploration
3. Supervised machine learning
4. Unsupervised machine learning
5. Conclusion

**List of R scripts**

1. Main tutorial – **MachineLearning.Rmd**
2. Solutions folder
   1. Solution supervised K-nearest neighbors examples – **knn-1.R** and **knn-2.R**
   2. Solution for supervised decision trees – **dectree.R**
   3. Solution for unsupervised K-means clustering – **kmeans.R**
   4. Solution for unsupervised principal components analysis – **pca.R**