# Summative Assignment Artificial Intelligence COMP2261 – Machine Learning 2020/2021

#### Matthew Chapman

MATTHEW.CHAPMAN@DURHAM.AC.UK

Department of Computer Science Durham University Durham, United Kingdom

#### Abstract

This paper describes

Keywords: Bayesian Networks,

Kramer (1991)

## 1. Problem framing (10%)

The problem I plan to solve is of predicting the number of Covid-19 cases in the future, which can be tomorrow or next week.

The motivation is to create machine learning models trained on real data aid the analysis of the pandemic and inform public health decision making.

## 2. Experimental procedure (35%)

- Clean the dataset.
- Split the dataset into training and test sets.
- Train a logistic regression model.
- Train a polynomial regression model.
- Train a normal regression model.

#### 3. Results (25%)

- Make comparisons between the 3 predictive models
- Provide necessary tables and charts to summarise and support the comparisons.

- 4. Discussions (20%)
- 4.1 Chosen models
- 4.2 Experimental procedure
- 4.3 Limitations
- 5. Conclusions and lessons learnt (10%)
  - Discuss the results and draw conclusions from your experimentation

### References

Mark A Kramer. Nonlinear principal component analysis using autoassociative neural networks. *AIChE journal*, 37(2):233–243, 1991.