MSc in Software Design with Artificial Intelligence

Initial Project Concept

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| Student Name: | Simon McLain |
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| Project Title: | A comparative analysis of the accuracy of Machine Learning Algorithms/Models at predicting COVID-19 cases in Ireland |
| Project Background: | Applying Machine Learning models for COVID-19 prediction could potentially improve the prediction of community infections on the island of Ireland.  Machine Learning is very efficient at handling large amounts of data and allows for scope improvement as more is known about the subject and provides the ability to automate the process.  As we enter a new phase in the pandemic more efficient modelling of COVID-19 could inform the relative Irish health and governmental bodies of current and future patterns of the virus transmissibility.  Ireland is a unique island spilt into two jurisdictions with no current studies examining the prediction of covid cases. |
| Project Challenge: | Create an efficient and accurate Machine Learning model using recognised data that predicts COVID-19 cases across both jurisdictions in Ireland. |
| Proposed Approach: | Conduct a comparative analysis of relevant Machine Learning algorithms built for predicting COVID-19 cases.  During the literature review phase research how machine learning has been applied to Ireland in aiding the battle against the pandemic.  Gather official COVID-19 data for both jurisdictions in Ireland.  Using Python, create and compare models such as, Deep Neural Networks, Naïve Bayes and Decision Trees that are tailored for Ireland to determine the most accurate algorithm for predicting COVID-19. |