

Nuffield Research Placement 2018

Using natural selection to generate artificial data

Henry Wilde

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When we wish to compare the performance of two similar algorithms against one another, it is difficult to discern why one may outperform the other with the same data. In this project we will use Python to mimic the natural selection process; constructing parts of a genetic algorithm that takes two algorithms and generates populations of artificial datasets for which one algorithm outperforms the other. The hope is then to discover what makes these datasets better-suited for our preferred algorithm through data visualisation and analysis, while also taking some time to analyse the genetic algorithm itself.