

Senior Thesis Proposal **Genetic Algorithms and the Travelling
Salesman Problem** Kylie Bryant Advisor: Professor Benjamin

For my thesis I plan to explore different approaches to applying genetic algorithms to the travelling salesman problem. This will include an explanation of how genetic algorithms are used and how they work as well as some background on the travelling salesman problem.

I used genetic algorithms while working at the Defence Science and Technology Organisation in Australia and have had an interest in applying genetic algorithms to different problems since then. The travelling salesman problem seems the perfect place to start as it has many applications in the real world and, as yet there is no algorithm to solve this problem. From what I have read so far, there are many different ways to apply genetic algorithms to the travelling salesman problem and the results appear to be very useful.