PROJECT REPORT
COMPARISON OF A* AND GENETIC
IN TRAVELING SALESMAN PROBLEM
Sie, Ricky Gunawan Setya
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INFORMATICS ENGINEERING DEPARTMENT
FACULTY OF COMPUTER SCIENCE
SOEGIJAPRANATA CATHOLIC UNIVERSITY
Comparison of A* and Genetic in Traveling Salesman Problem

by

Sie, Ricky Gunawan Setya – 13.02.0003

This project has been approved and ratified by the Faculty of Computer Science on January 5th, 2017

With approval,

Supervisor
Rosita Herawati, ST., MIT
NPP: 058.1.2004.263

Examiners,

1) Suyanto Edward Antonius, Ir., M.Sc

2) Shinta Estri Wanhuningrum, S.Si, M.Cs
   NPP: 058.1.2007.272

3) Hironimus Legi, S.Kom., M.Kom
   NPP: 058.1.2007.273

Dean of Faculty Computer Science,

Erdhi Widyanto Nugroho, ST., MT
NPP: 058.1.2002.254
STATEMENT OF ORIGINALITY

I, the undersigned:

Name : Sie, Ricky Gunawan Setya
ID : 13.02.0003

Certify that this project was made by myself and not copy or plagiarize from other people, except that in writing expressed to the other article. If it is proven that this project was plagiarizes or copy the other, I am ready to accept a sanction.

Semarang, January 5th, 2017

Sie, Ricky Gunawan Setya
13.02.0003
ABSTRACT

Traveling Salesman Problem (TSP) is problem that has been deeply developed by many researcher. Which the rules is to visits cities once and go back to the start city after finished. Many algorithms have been compared to find the optimal solution, but yet still not gives optimal solution.

This project will solve the problem using algorithm. Algorithm that will be used is A* algorithm and Genetic algorithm to compare which algorithm that is better in solving TSP. For this to be happened, this project will create programs that using Java Programming Language.

The result of this project is to compare the processing time and minimum cost required of both algorithms. Conclusion of this project is Genetic algorithm have got more winning than A* algorithm because of its constant of processing time even with many cities visited in one travel.

Keywords: Traveling Salesman Problem, A*, Genetic, Java
PREFACE

Traveling Salesman Problem (TSP) is one of the most difficult problem that still being developed to find more optimal solution when visiting multiple cities. In a simple traveling with only below five places might not be hard for people to understand. But what if the traveling routes takes more than five places. Surely it will give more confusion for people to choose the best route. Many algorithms have been used but yet people still not knows what type of algorithms that bests in solving TSP. So this project will used two algorithms that have totally different solving type in order for comparison matters. This algorithms are A* algorithm and Genetic algorithm.

For the first chapter of this report will explain about background, scope, and objective of this project. In the chapter 2, this report will explain about literature of the problems and algorithms which is important thing to note. Then, the chapter 3 will explain the process of how this project will be done. After that, in the chapter 4 will give analysis and design of the project. In chapter 5, explanation of the program implementation and testing of how it will be done are going to be reviewed in this chapter. And at the chapter 6 will explain about conclusion and result of this project, and also future research to developed the project to be more better.
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