## Abstract (200 – 300 words)

## Acknowledgements

## Ethics

## Table of Contents – (Include section on Figures, Tables and abbreviations)

## Glossary?

## Introduction

## Literature Review

## System Design and Development

### Overview – (including input/output display method)

### Software Layer

Overview

Module Representation

State Representation

Priority Queue – (including heuristics)

Search Algorithm

### Hardware Layer

Overview

Inverse Kinematics

Manipulator Base Location Planning

Motion Planning

### Feedback Strategies

Failure Memory - (possibly out-of-scope but considered and researched)

Disallowing moves

Application of physical constraints

## System Implementation

### Hardware and Software Specifications – (manipulator used [automata EVA], python, modules chosen)

### Implementation Challenges – (efficiency and memory use)

## Testing and Results

### Testing Method – (timing/efficiency, varying inputs)

### Performance Metric – (failure rate, timing)

### Analysis of results

## Discussion

### Interpretation of results – (what results say about current system)

### Comparison to existing work

### Implications – (potential impact of work on the field)

## Planning and Time Management

### Project Management Procedures

### Project Management Reflection

### Risk Assessment

### Evolution of Project Plan

## Conclusion

## Further Work

## References

## Appendix A - Initial Report

## Appendix B - Code