

## Declaration

The Project Report entitled “Space efficient application for reachability of source to destination in a robot navigation system” is a record of bonafide work of Jyothin Movva (2010030071), Satya Varsan KS (2010030151), Devaraj Acharya (2010030040), Siva Karthik (2010030329), Snehith K (2010030341), submitted as a requirement for the completion of the course **Design and Analysis of Algorithms** in the Department of Computer Science and Engineering to the K L University, Hyderabad. The results embodied in this report have not been copied from any other Departments/University/Institute.

Jyothin Movva

Satya Varsan KS

Devaraj Acharya

Siva Karthik

Snehith K

## **Certificate**

This is to certify that the Project Report entitled “Space efficient application for reachability of source to destination in a robot navigation system” is being submitted by Jyothin Movva (2010030071), Satya Varsan KS (2010030151), Devaraj Acharya (2010030040), Siva Karthik (2010030329), Snehith K (2010030341) as a requirement for the completion of the course **Design and Analysis of Algorithms** in the Department of Computer Science and Engineering, K L University, Hyderabad is a record of bonafide work carried out under our guidance and supervision.

The results embodied in this report have not been copied from any other departments/ University/Institute.

**Supervisor**

**Signature of the**

Udaya Rani Gurala

**Signature of the HOD  
the Examiner**

**Signature of**

## ACKNOWLEDGEMENT

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## **ABSTRACT**

- The problem of graph Reachability is to decide whether there is a path from one vertex to another in each graph
- In this project will we try to implement a space efficient algorithm for reachability in directed geometric graph.
- The applications will find the shortest path for robot so it can spend less resources reaching that destination.
- Since the computers in moving robots have space and power limitations, using shortest distance technique will help us achieve better efficiency

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