



# INFORMATICS INSTITUTE OF TECHNOLOGY

**Informatics Institute of Technology**  
In collaboration with  
University of Westminster(UOW)

BEng in Software Engineering  
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Final Thesis Submission

For

**Framework for generating internal space maps using Augmented  
Reality and Object Detection**

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## Abstract

The study analyzes the current standard procedures in mapping identifies the short comings and suggests a new methodology that uses Augmented Reality and Object detection to generate a map/wireframe of an enclosed space with the help of a mobile device. The study proposes the use of the technologies in a mobile environment to help remove some of the problems that are faced in GPS systems in the current day and age. And helps support a new type of mapping. The approach taken will be to create an algorithm that converts pointData gathered from a scan into passable values to be processed. As a next step the underlying technology is packaged into an accessible form to integrate as modules to applications by other developers. The logic behind the algorithm is studied and analyzed to understand if the theory put forward can act as a solution to the underlying problems faced in the industry and justify the approach if successful