

SCHOOL OF ENGINEERING
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CONSTRUCTION OF AN AUTONOMOUS VACUUM
CLEANER ROBOT

FINAL REPORT

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ABSTRACT

Engineers are always out to improve something, and in the process make our lives simpler. After learning about the capabilities of a micro controller (PIC 16F84A), a kind of computer without input or output devices, a question was posed: How can a micro controller be put to practical use? To make life easier, an automated vacuum cleaner could be constructed. Constructing this vacuum cleaner provided a lot of experience in the realm of making something as conveniently as possible. So this project, supported by an extensible, reusable framework using a modified radio controlled car.

The main aim is for the vehicle to be able to navigate around an area without human guidance or intervention. The features of the robot includes obstacle avoidance, there are two infrared sensors mounted in front the vehicle provide awareness of its surroundings.

This project construction and design an autonomous vacuum cleaner robot that is use to minimize the human operation, it can clean your home while you are outdoors doing some shopping, or any unknown indoor environment.