

# EE/CE 468 : Mobile Robotics

Project Functional Requirements

Optimizing Cleaning Paths for Robots in Domestic Settings

Ali Asghar Yousuf | ay06993@st.habib.edu.pk  
Muhammad Azeem Haider | mh06858@st.habib.edu.pk



November 3, 2023

Dhanani School of Science and Engineering  
Habib University  
Fall 2023

Copyright © 2023 Habib University

## Contents

## 1 Introduction

Cleaning paths for robots at homes are usually obstructed by furniture present which leads to inefficient work. Mobile robots for cleaning at home such as the “Roomba” by iRobot, has been described as drunk due to them getting stuck under furniture and stop working after hitting obstacles in their path. The project aims to research the cleaning and obstacle finding algorithms of these robots in domestic settings and study on how these can be implemented in a manner where the path planning of the robot is much more efficient for cleaning purposes.