



Cover page

Project title: EcoBin

Academic Year: 2024

Group Members: Alaa Adham

Department Name: computer engineering

Batool kharraz

Project Type :Hardware

Supervisor Name: Dr.hanal abu zanet

Format:

- ☐ Single space, Times New Roman.
- ☐ Al12 pt,
- ☐ Maximum 1 page.

Abstract Body:

Items must be provided in the Abstract:

- ☐ Why do you think this project is important? Please explain the significance of this Project in brief.
- ☐ In your point of view what are the important aspects that should be covered in the project?
- ☐ Objective(s): In your view, please explain the main objectives of the project.
- ☐ Methodology: Give a brief outline of the application development process.
- ☐ Had this project been done before? Are there any similar applications available today?
- ☐ **Note:** Please deliver this abstract early to ensure that your Project has been approved by the department's projects committee. **Registration will not be done without this approval.**



Project's Abstract:

> In general, recycling is of great importance to the environment. This process begins by classifying and separating waste based on the raw materials contained in it. This project will speed up and facilitate the waste classification process.

This project will help people sort the garbage automatically and quickly, without having to spend time to do it manually.

> The most important point is that the device separates waste correctly without any error

> 1. Increase awareness of the importance of waste separation for the environment

2. Saving time and effort for the user

3. Increased accuracy and speed in the separation process

> In our methodology, we first conduct a thorough analysis of project requirements to define our objectives and identify the necessary components. Subsequently, we carefully select a camera and sensors that are compatible with our Arduino platform. Once the components are chosen, we proceed with the hardware setup, ensuring proper assembly and wiring. In parallel, we works on coding the algorithms for object detection and sorting. After completing the hardware and software components, we integrate them and conduct extensive testing to ensure seamless functionality.

> Yes, similar projects have been implemented for automated waste sorting, but our project will be more user-friendly and affordable while ensuring the accuracy of the device.