Literature Survey

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1.	**Paper title**	Intelligent waste classification system using deep convolutional neural network by Olugboja adedeij, Zenghui Wang* (2019)
	Problem Definition	The proposed solution aims to simplify the waste separation process, which is usually done manually by hand-picking, by using an intelligent waste material classification system based on machine learning tools.
	Methodology/ Algorithm	Collection of waste image dataset, preprocessing, feature extraction, training, testing.CNN
	Advantages	the system can achieve high accuracy in waste material classification, potentially reducing errors in the separation process.
	Disadvantages	The accuracy of the system may be affected by factors such as lighting conditions, camera quality, and the complexity of the waste items being classified.

2.	**Paper title**	Applications of convolutional neural networks for intelligent waste identification and recycling by ting-wei-wu,hua zhang march (2023)
	Problem Definition	The aim is to provide insights into the key fields of CNN applications in IWIR and it covers challenges,limitations and future prospects.
	Methodology/ Algorithm	Advanced image analysis approaches,convolutional neural network(CNN)
	Advantages	Segmentation and detection,Recyclable material identification,trash pollution detection,solid waste classification.
	Disadvantages	Data and hardware requirements,interpretability, generalization.

3.	**Paper title**	Garbage classification system based on improved shuffleNet v2 by Zhichao chen,jie yang Lifang chen,Haining jiao (March 2022)
	Problem Definition	The problem addressed in this study is the need for a more accurate and efficient garbage classification system for domestic waste.
	Methodology/ Algorithm	CNN(convolutional neural network),GCNet (Garbage Classification Network),deep learning
	Advantages	The proposed GCNet model achieves high accuracy of 97.9%
	Disadvantage	The study only tested the proposed GCNet model on a self-built dataset, and it is unclear how well it generalizes to other garbage classification tasks.

4.	**Paper title**	Smart garbage classification by Aviral jain,vidipt khetriwal(jan 2023)
	Problem Definition	To make the recycling process faster and more effective, it is crucial to categorize garbage into groups with similar recycling processes. The proposed solution involves using deep learning models, specifically a Convolutional Neural Network (CNN)
	Methodology/ Algorithm	CNN with transfer learning and Densenet169 and mobilenet.
	Advantages	Reduce more impact,public health and economy and reliable for image recognition.
	Disadvantages	Require more investment,require regular maintenance and concerns about security of images.

5.	**Paper title**	Recyclable waste image recognition based on deep learning by qiang zhang,xujuan zhang,xiaojun mu,zhihe wang(Aug 2021)
	Problem Definition	To improve the accuracy of waste sorting through the use of deep learning and computer vision/mobile phone terminals.
	Methodology/ Algorithm	Data collection,preprocessing ,model training,evaluation ,improvement,system evaluation.
	Advantages	Offers a potential solution to problem of inaccurate waste sorting.
	Disadvantages	Requires significant data to achieve accuracyand requires more power to train and run.