List of related research papers

1. Developing an Intelligent Waste Sorting System with Robotic Arm: A Step towards Green Environment [1]

2. Artificial Intelligence in Automated Sorting in Trash Recycling [2]

3. Development of Automatic Smart Waste Sorter Machine [3]

4. Waste Segregation Using Machine Learning (journal) [4]

5. Classification of Recyclables from E-Waste Stream Using Thermal Imaging-Based Technique [5]

6. Smart Bin Implementation for Smart City [6]

7. The Design and Implementation of Smart Trash Bin [7]

8. Intelligent Waste Separator [8]

9. Smart Bin: Internet-of-Things Garbage Monitoring System [9]

Paper	Name	Principle	Pros	Cons
1	Developing an Intelligent Waste Sorting System with Robotic Arm	Use a robot's arm to pick trash into a belt and use - voltage sensor to detect food - IR sensor to find trash - inductive sensor to detect metal	1.cheap 2.Automatic arm 3.mobile app	1.1 trash per operation 2.inaccurate sensors
2	Artificial Intelligence in Automated Sorting in Trash Recycling	Test many Machine learning algorithms to find the best one with the highest accuracy	1.CNN is the most accurate one	1.time consuming 2.inaccurate with glass
3	Development of Automatic Smart Waste Sorter Machine	- IR sensors for detection trash - metal sensor - glass sensor - laser and LDR for separating paper and transparent plastic	1.cheap 2.automatic system	1.slow 2.unable to classify organic waste
4	WasteSegregation Using Machine Learning (journal)	Use raspberry pi and pi cam for object detection, then use a robot's arm to transfer compossible and incompossible trash into 2 bins	1.automatic 2.no sensors 3.upgradable	1.limited types of trash (2) 2.awful delay
5	Classificationof Recyclables from E-Waste Stream Using Thermal Imaging-Based Technique	Use thermal imaging technique and SVM to classify recycle trash from electronics waste by inspecting radiation when received head from hot chamber	1.no external disturbance 2. work well with bad condition i.e. lot of dust	1.need light power 2. work only in the specific areas 3.temp control in hot chamber

Paper	Name	Principle	Pros	Cons
6	SmartBin Implementation for Smart City	use level sensor to measure trash level in bins and GSM, IOT to send SMS, GPS of full bins to trash keepers	1.simple 2. real time	1.can't separate trash
7	The Design and Implementation of Smart Trash Bin	Use Ultrasonic sensors to detect trash level in bins and send SMS to report trash keepers.	1.cheap 2.solar cell	1.can't separate trash

8	IntelligentWaste Separator	Transfer images into grey scale images and use servo motors to deliver trash into bins	1.high accuracy 2.simple	1.1 trash per operation 2.can't work with irregular trash
9	SmartBin: Internet-of-Things Garbage Monitoring System	Use Ultrasonic sensors to measure trash level in bins and use Thinspeak to send data via IOT	1.real time 2.IOT	1.can't separate trash

References

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4. 'Waste Segregation Using Machine Learning', Accessed December 5, 2019.https://www.ijraset.com/fileserve.php?FID=14058

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