Literature Review

S.No	Author(s)	Title	Source	Year	Methodology	Findings	Gaps
1	**Sujan Poudel & Prakash Poudyal**	Classification of Waste Materials using CNN Based on Transfer Learning	ACM Digital Library	2022	Applied transfer learning on pre-trained CNN models (InceptionV3, InceptionResNetV2, Xception, VGG19, MobileNet, ResNet50, DenseNet201) to classify waste into seven categories: cardboard, glass, metal, organic, paper, plastic, and trash.	InceptionV3 achieved the highest accuracy, effectively distinguishing between biodegradable and non-biodegradable waste.	Did not develop a web-based application; lacked real-time classification capabilities and integration with IoT devices.
2	**Jenil Kanani**	Image Recognition for Garbage Classification Based on Pixel Distribution Learning	arXiv	2024	Proposed a novel approach inspired by pixel distribution learning techniques to enhance automated garbage classification, aiming to reduce computational complexity and improve robustness to image variations.	Demonstrated the potential of pixel distribution learning in automated garbage classification technologies.	Did not develop a web-based application; lacked real-time classification capabilities and integration with IoT devices.
3	**Zhang et al.**	Applications of Convolutional Neural Networks for Intelligent Waste Identification and Recycling: A Review	ScienceDirect	2022	Conducted a comprehensive review of 355 articles on CNN applications in intelligent waste identification and recycling (IWIR).	Highlighted the potential of CNNs in IWIR, noting their superior performance over traditional methods.	Identified challenges such as the need for large, diverse datasets and real-time processing capabilities; did not focus on developing web-based applications or integrating

							with IoT devices.