**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 15 May 2023 |
| Team ID | NM2023TMID13277 |
| Project Name | Intelligent Garbage Classification Using Deep Learning |

**Proposed Solution :**

Project team shall fill the following information in proposed solution.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Accurate classification of different types of garbage to facilitate proper disposal and contribute to environmental sustainability. |
|  | Idea / Solution description | Develop an intelligent garbage classification system using deep learning algorithms that can analyze images of garbage and categorize them into specific waste types, such as plastic, paper, glass, or organic waste. |
|  | Novelty / Uniqueness | The solution leverages deep learning techniques to train a model on a large dataset of garbage images, enabling it to learn complex patterns and accurately classify diverse types of garbage. It incorporates state-of-the-art computer vision algorithms for enhanced accuracy. |
|  | Social Impact / Customer Satisfaction | The solution addresses the pressing issue of efficient waste management, promoting recycling and proper disposal practices. It empowers individuals, waste management organizations, and governments to make informed decisions and take effective actions, leading to a cleaner environment and improved customer satisfaction. |
|  | Business Model (Revenue Model) | The business model could involve licensing the intelligent garbage classification system to waste management companies, municipalities, or recycling centers, charging a fee based on usage or subscription. Additionally, partnerships with waste management technology providers or integration into existing waste management solutions could generate revenue. |
|  | Scalability of the Solution | The solution is scalable as it can handle a large volume of garbage images for training and classification. It can accommodate an increasing number of users and adapt to evolving waste management needs. The architecture and infrastructure are designed to support efficient processing and classification, ensuring scalability as the user base grows. |