**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 05 september2023 |
| Team ID | NM2023TMID19094 |
| Project Name | Intelligent garbage classification using deep learning |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Preventing waste prevents pollution, making your neighborhood and community a safer, healthier place to live. In the end, you benefit, the environment benefits, the community benefits, and your company establishes itself as a good corporate citizen, providing immeasurable, lasting rewards. |
|  | Idea / Solution description | The most effective way to prevent trash from polluting our waterways is to reduce the amount of waste you create. Replace single-use plastic packaging, bottles, and containers with reusable products or eliminate packaging when possible. |
|  | Novelty / Uniqueness | The deep learning model has a powerful learning ability, which integrates the feature extraction and classification process into a whole to complete the image classification test, which can effectively improve the image classification accuracy |
|  | Social Impact / Customer Satisfaction | Previous studies have shown that garbage classification reduces the volume of garbage and accelerates garbage disposal, thereby improving environmental quality (Giannis et al., 2017), reducing GHG emissions (Calabrò, 2009; Wang and You 2021), and mitigating water and soil contamination (Nie et al., 2018; Tong et al., ... |
|  | Business Model (Revenue Model) | By capturing the object with the camera, the AI algorithm focuses on identifying the object in the user's hand, predicting with very high accuracy which type of trash it is, and telling the user to put it in the correct bin via the screen. |
|  | Scalability of the Solution | Garbage classification reduces the mutual pollution between different garbage, which is beneficial to the recycling of materials. 2. Garbage classification is conducive to the separation of ecological waste and non-ecological waste, reducing the difficulty of waste disposal |