

ELTU2014 English for Engineering Students I – Project Outline

ELTU 2014 _ADC1

Group members

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Start planning the project with the help of the items below:

1. Project title
Smart Trash Bin with Shredder
2. Profile of potential users
General Market. Everyone using a trash bin will find the advantages of our product.
3. Needs analysis of potential users
Every household needs to change bags in the trash bin regularly and always disturbed by the smell inside the bin. The waste paper occupies too much space in the trash bin so that users change the bags more frequently.
4. Proposed innovation
Automatically seal and change bags.
Automatically compress garbage.
Shredder.
Screen for displaying the remaining capacity.
5. Description of innovation and application
Our smart bin is able to seal and change bags in the bin automatically. With the paper shredder attached to it, the bin may preprocess the waste paper into tiny pieces to save spaces within the bin. Users can also check whether the bin is full or about to full and change a new bag by the information displayed on the screen.
6. Expected outcome and benefits
Our product enables users to process their household waste in a more decent and elegant way, keeping them away from the annoying process of changing the bags and smell of trash.
7. Techniques for collecting & analyzing information & data
Online resource.
8. Key terms for conducting information search on print and electronic resources
Smart Trash; Automatic Speech Recognition ; Robotic Arm; Pressure Transducer; Shredder; LED Display.
9. Working Bibliography (at least 5 items)
Indicate all the secondary sources of information the group has consulted in the library and online search.
[1] L. R. Rabiner, "A tutorial on hidden Markov models and selected applications in speech recognition," Proceedings of the IEEE, pp. 257 - 286, 2 1989.
[2] K. Park, "CAPACITIVE PRESSURE TRANSDUCER". US Patent 4,227,419 , 14 10 1980
[3] M. Cantwell, B. Davison, M. Cantwell, C. Gonyea and J. Cardwell, "Heat Sealing Fundamentals, Testing, and Numerical Model," WORCESTER POLYTECHNIC INSTITUTE, 2015.
[4] G. Scheible, "PROXIMITY SENSOR". US Patent US 6,798,217 B2 , 3 9 2002.
[5] R. Ekman, "Development of a Plastic Shredder," Lund University, Sweden, 2018