Preface

Households of today are becoming smarter and more automated. Home automation delivers convenience and creates more time for people. Domestic robots are entering the homes and people's daily lives, but it is yet a relatively new and immature market. However, a growth is predicted and the adoption of domestic robots is evolving. Several robotic vacuum cleaners are available on the market but only few ones implement which can control remotely and handle real time data. The purpose of this project is to design and implement a Autonomous Cleaning Robot(ACR) which can control via Phone Application. Autonomous Cleaning Robot is designed to make cleaning process become easier rather than by using manual vacuum. ACR will have several criteria that are user-friendly.

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References

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2. https://ieeexplore.ieee.org/abstract/document/4209283
3. Requirement specification : Practical Requirements for a Domestic Vacuum-Cleaning Robot
4. https://pdfs.semanticscholar.org/ce2c/14f80174e3c86e9f249cf9db0d583fe74a9e.pdf
5. User Requirements and Classification Process: Living with a vacuum cleaner
6. https://www.researchgate.net/publication/257780502_Living_with_a_Vacuum_Cleaning_Robot
7. Google Form : https://forms.gle/wY32LvZnNaT1PR5n9

Appendix

Appendix A

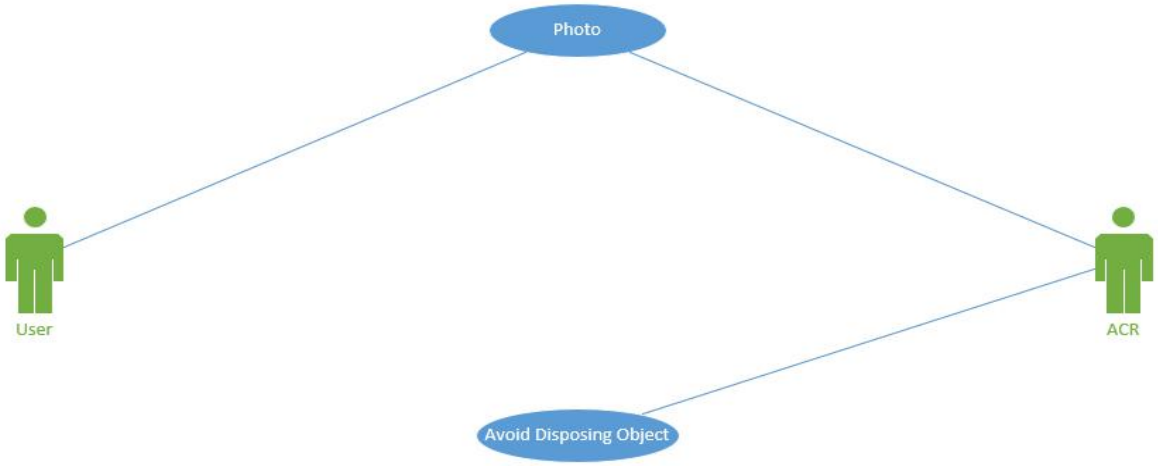
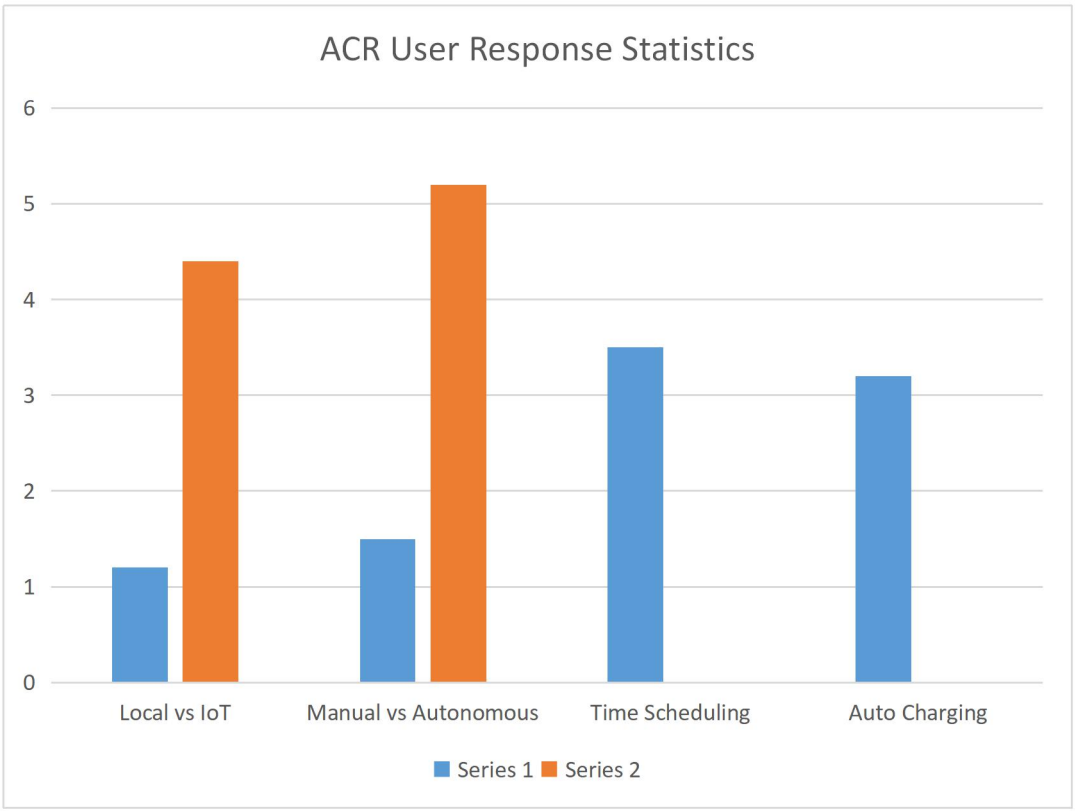


Fig- Use Case Diagram for Object Detection

ACR system: Object Detection	
Actors	User, Autonomous Cleaning Robot (ACR)
Description	User have to give the photo of the object which will be filtered
Data	Photo
Stimulus	User value issued by Image Processing
Response	Object will not dispose
Comments	Android App must need to provide reliable activity for take the photo.

Appendix B

Following is a statistical chart after analyzing user response from Google form-



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