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A RESEARCH PAPER ON SMART HOME

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Abstract- IOT is very important part in world. These are everyone used to any time anywhere, for example: Smart Watch, Smart Laptop, Smart Car, Bike, Smart Mobiles, Smart Tabs, Sensors devices etc.

Every second every peoples thinking for smart homes, But Smart Homes is costly. But today time is very important because, best lighting, beautiful design, look's awesome and working to use only speaks and sensors and some remotes controls.

Keywords- IOT, Smart-Home, Needs, Security Challenges, Advantages and Disadvantages.

I. INTRODUCTION

“The Internet of Things is a system of interrelated computing devices, mechanical and digital machines, animals or peoples that are provided with unique identifies and the ability to transfer data over a network without requiring human to human or human to computer interactions.”

Smart-home is convenient set up where applications or devices can be automatically controlled remotely or sensors from anywhere with an internet connected network device.

II. IOT

IOT has been widely cited as a solution to reduce stress in smart-homes and as a result there has been a strong focus on research paper. Smart-home is very most an important part of life. There are secure application's or device's use by smart-home. It is part of Cloud computing platforms in IOT's.

Benefit in Internet of Things

- New business opportunities means are IOT can provide you the ability data from the network and use advanced analytics to uncover business insights and opportunities.
- New capabilities to predict and acts.
- Rapid response.
- New revenue streams.
- Improve controls of operations processes.
- Productivity improvement.
- Predictive analysis.

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- Reduction of human's errors.
- Improve monitoring with IOT sensors and smart-home devices provide the capability to manage a network of physical objects.

Smart-Home:

Smart home technology, also often referred to as home automation or domotics (from the Latin "domus" meaning home), provides homeowners security, comfort, convenience and energy efficiency by allowing them to control smart devices, often by a smart home app on their smartphone or other networked device.



Fig1.1 – Design for Smart Home. (Image Credit: Google)

III. NEED FOR SMART-HOME

- Managing all of your home devices from one place.
- Flexibility for new devices and new devices appliances.
- Maximizing homes securities.
- Remote controls of our home functions.
- Improving appliances functionalities.
- Home managements insights.
- Increased energy efficiency.



IV. SECURITY ATTACKS FOR SMART HOMES SERVICES

Smart-Home Services	Harms Area	Security attack options
Care for people with disabilities	Requires attention	Sensors, video surveillances, communication systems etc.
Health-cares	Don't take medicine, pacemaker, malfunctioning etc.	Sensors, communication system, external communications, video surveillance.
Home Environment	Fire, gas leakage.	Sensors, video surveillances, communication system, external communications.
Privacy	Violations of privacy, data gathering	Video surveillance, integrating and communications systems. (It is not security attack only dangerous.)
Smart-home appliance	Turns on or off wrong times.	Sensors, integrating system, video surveillances, communications systems.

V. LIST OF SOME SMART HOME ASSISTANT DEVICES

- Amazon Alexa. (It is best Eco-Speaker)
- Amazon Echo. (Best Speaker)
- Samsung Smart Things Hub. (Smart Samsung Device)
- Wink Hub2. (It is Smart Hub)
- Google Assistant.
- TP-Link HS200. (It's best lighting switch)
- Philips Hue. (Best Smart-Lighting)
- Ecobee4. (Best Thermostat)
- NetGear Arlo Q. (It's best security device)
- LG smart TV. (Best Television)

- Ecovacs Deebot N79S. (Best Vacuum)
- Char-Broil digital election smoker with smart chef technology. (It is best Grill)
- Perfect Bake pro. (Best Cooking device)

VI. ADVANTAGES AND DISADVANTAGES FOR SMART HOME

A. Advantages for smart-home:

- Improve customer engagements.
- New Applications and Devices used for developments.
- Technology optimizations.
- Reduced wastes.
- AI facilities.
- Enhanced data collections.

B. Disadvantages for smart-home:

- Technology Learning Curve.
- Security and Privacy.
- Sedentary Lifestyle.
- Costly.

VII. CONCLUSION

This generations is important topic for smart-home, but this is very costly and totally based on smart devices and newly applications. This topic is totally changed for my life. My guidance's and my teacher's help this smart-home topic. Thanks a lot my guidance's and my teacher's.

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IX. REFERENCES

1. Kang Bing, Liu Fu, Yun Zhuo, and Liang Yanlei, "Design of an Internet of Things-based Smart Home System", The 2nd International Conference on Intelligent Control and Information Processing, July2011, pp. 921-924.
2. Seam cat software tool, <http://www.seamcat.org/>
3. V. Rohokale, R. Prasad, N. Prasad, R. Prasad., Interoperability, Standardization and Governance in the Era of Internet of Things (IOT).In Internet of Things Global Technological and Societal Trends. RiverPublisher. Aalborg, Denmark 2011.



4. <https://www.smart-industry.net/2020-trends-for-battery-free-bluetooth-5-0-internet-of-things/>
5. <https://www.cnet.com/news/the-best-smart-home-devices-of-2020-amazon-alexa-google-assistant-echo-dot-nest-hello-arlo/>
6. <https://www.techradar.com/in/news/smart-home-devices>
7. L. Atzori, A. Iera, and G. Morabito, "The Internet of Things: A Survey," *Computer Networks*, vol. 54, no. 15, 2010, pp. 2787–2805.
8. http://cdn.iotwf.com/resources/71/IoT_Reference_Model_White_Paper_June_4_2014.pdf
9. De Crescenzo F, Foti F, Ciabattini M, Del Giovane C, Watanabe N, Schepisi MS, Quesada DJ, Cipriani A, Barbui C, Amato L (2016) Comparative efficacy and acceptability of pharmacological treatments for insomnia in adults: a systematic review and network meta-analysis. *The Cochrane Library*.
10. Cavoukian, J. Polonetsky, C. Wolf **European smart home market development: public views on technical and economic aspects across the United Kingdom, Germany and Italy** *Energy Res. Soc. Sci.*, 3 (2014), pp. 65-77.
11. M. Chan, E. Campo, D. Esteve, J. Fourniols **Smart homes — current features and future perspectives** *Maturitas*, 64 (2009).

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