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To Study the Awareness of Ambient Intelligence

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ABSTRACT

In last ten years, an astonishing mobile computing revolution has been observed. Smartphone installation is expected to reach 6 billion by the end of 2020, according to research firm IHS Markit. Over half of the world's population are carrying and using personal devices that have powerful processors, sensors, cameras, high speed communications and intelligent applications. In the coming ten years that is 2020 to 2030, an Ambient Intelligence (AmI) revolution will be coming where all the above-mentioned technologies will be embedded in our homes, grocery stores, offices, hospitals and transportation services. AmI will be one of the key elements of the Fourth Industrial Revolution. In the vision of Ubiquitous Computing IoT and Intelligent IoT and Fog Computing are in Trends, they are technology trends in computer vision and AI. It is also important to know about Ambient Intelligence how Internet of Things (IoT) is explored and its solutions should incorporate AmI properties to address the users, business and society. Ambient intelligence (AmI) deals with ubiquitous computing devices, where physical environments do interact with people intelligently and unobtrusively. AmI environments should be well aware of people's needs, customizing requirements and forecasting behaviours. AmI environments can be diverse, such as homes, offices, meeting rooms, schools, hospitals, control centres, vehicles, tourist attractions, stores, sports facilities, and music devices. Artificial intelligence research aims to include more intelligence in AmI environments, allowing better support for humans and access to the essential knowledge for making better decisions when interacting with these environments.

Index Terms: AI, AmI, IoT, Ubiquitous Computing

INTRODUCTION

The scope for Ambient Intelligent technology is much larger than the personal level. It is possible to approach millions of users through various services such as commercial, public safety, planning, forecasting and research, and health monitoring by using Anticipatory mobile computing. There are many business opportunities which is likely to be explored, As said by Lars Hard who is CTO and founder of Expert maker and also known as AI guru, more creativity in this space is starting with the enterprise.
AmI is the vision of a surrounding environment as AmI concept is filled with smart and communicating devices. AmI devices are embedded in the environment and common objects. The presence of AmI devices is kept as seamless as possible.

Ambient Intelligence is bringing remarkable changes in the way people think and live. Interaction between humans and computers is greatly increasing in digital information, interface is also getting broader with availability of the media and mobile and portable communication. Ambient Intelligence allow computers to adapt user's preferences. The Ambient Intelligence have more empowered computer with many features and benefits of extra convenience, time saving and cost effectiveness, and it have the

possibilities for increased safety and security, as well as entertainment. AmI technology has the potential to have good impact on business and government processes, even in private life.

SOCIAL AND POLITICAL ASPECTS

The ISTAG advisory group suggests that the following characteristics will permit the societal acceptance of Ambient Intelligence:

- AmI should facilitate human contact.
- AmI should be oriented towards community and cultural enhancement.
- AmI should help to build knowledge and skills for work, better quality of work, citizenship and consumer choice.
- AmI should inspire trust and confidence.
- AmI should be consistent with long term sustainability personal, societal and environmental and with lifelong learning.
- AmI should be made easy to live with and controllable by ordinary people.

A major challenge that is find throughout this research of Ambient Intelligence is to build a bridge between the contradictory requirements of personalization and privacy. They are happening because of three points that is Interoperability, Saturation and Security.

- Interoperability for networks architecture and integration
- Saturation means increased volume of information and users
- Security to solutions with quantum cryptography
- Technological and Ethical challenges need to be overcome
- Social acceptance is critical

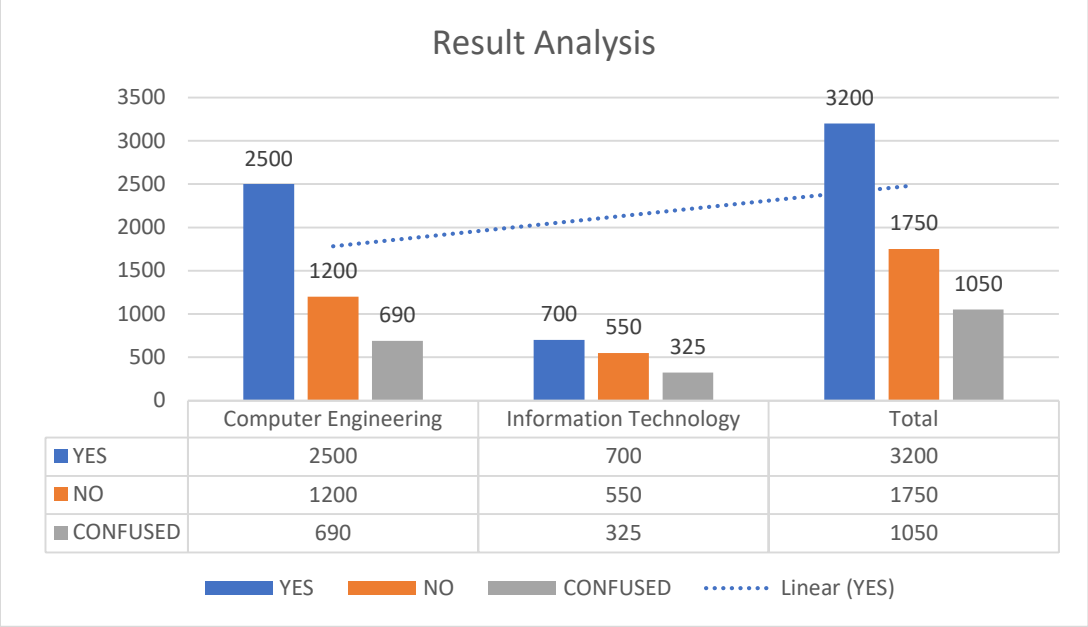
Research was done as per the following criteria:

Total data taken of Computer Engineering Field was: 4390

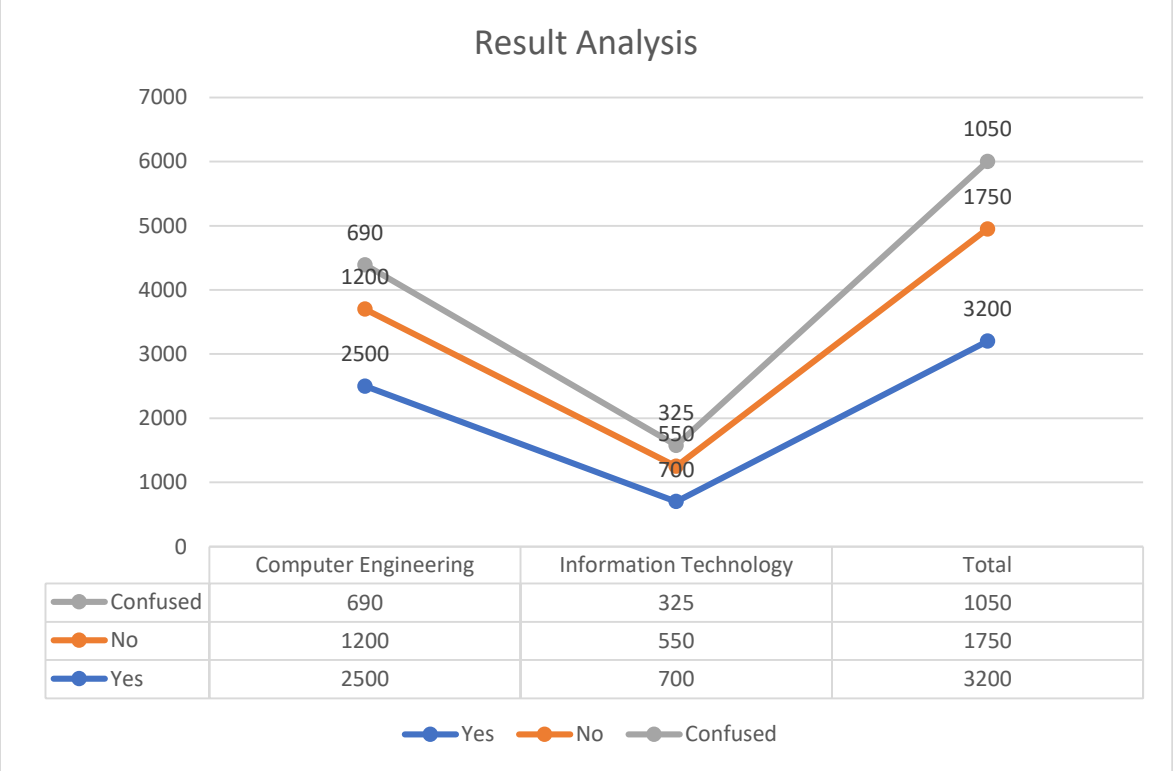
Total data taken of Information Technology Field was: 1575

After collecting the data Trend line Analysis was done to find the result.

Overall Result Analysis through Table				
	Yes	No	Confused	Total
Computer Engineering	2500	1200	690	4390
Information Technology	700	550	325	1575
Overall Result	3200	1750	1050	5965



	Computer Engineering	Information Technology	Total
YES	2500	700	3200
NO	1200	550	1750
CONFUSED	690	325	1050



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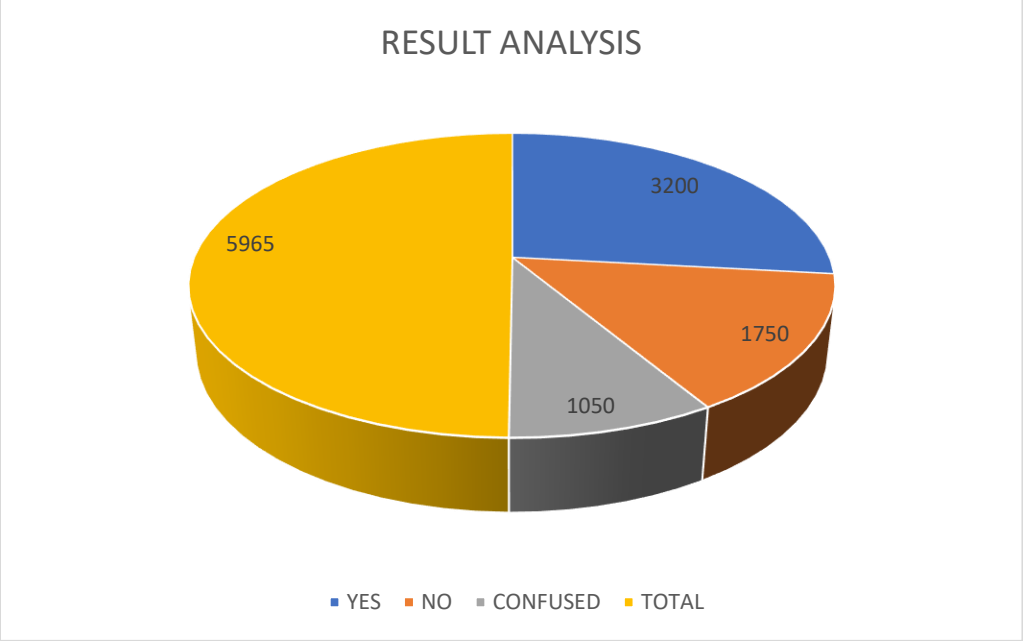

THE FUTURE

After doing this research it has been concluded that AmI has a great Attractive future blend mainly for the Computing devices, Communications between humans and devices, and Consumer electronics. Ambient Intelligence can also be defined as the area of study and to develop the embodiments for smart environments that can react to human events through sensing techniques, interpretation and service provision, and that also learn and adapt their operation and services to the users over time. These employ contextual information whenever it is available and it offer unobtrusive and intuitive interfaces to their users. Through a user-oriented employment of communication links, these systems offer Ambient communication and media delivery options between various users that allow seamless multi-party interactions and novel social networking applications.

REFERENCES

1. https://www.iotforall.com/ambient-intelligence-ami-iot-use-cases/
2. https://www.techworld.com/tech-innovation/what-is-ambient-intelligence-3697364/
3. https://www.bing.com/news/search?q=Ambient+Intelligence+Technology&qpvt=ambient+intelligence+technology&FORM=NWRFSH
4. https://www.infosys.com/insights/ai-automation/pages/ambient-intelligence.aspx
5. https://www.forbes.com/sites/insights-intelai/2018/09/21/ambient-intelligence-the-power-of-always-on-technology/#7c8780792a5e
6. https://ami-2016.github.io/
7. https://ieeexplore.ieee.org/document/6263229
8. https://www.quora.com/What-is-the-differnce-between-artificial-intelligence-and-ambient-intelligence
9. https://semiengineering.com/knowledge_centers/artificial-intelligence/ambient-intelligence/
10. https://www.researchgate.net/publication/330640992_Artificial_intelligence_and_ambient_intelligence
11. https://research.chalmers.se/en/publication/508740