

Survey on AI Implementation on Smartphone

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Abstract—Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems since AI is one of the most important recent developments in mobile phones. AI is capable of performing wonders. It can be as used in our daily life to perform several tasks. At the beginning we had phones which did not have any internet facilities then later smart phones arrived which had internet facilities and could perform many tasks that computer can perform. At that moment phones were smart but not intelligent as they couldn't identify real world things. Then there was severe game change in smart phone world when a man-made intelligence came up with smart phone. That is combination of artificial intelligence with a smart phone device made phones smarter as well as intelligent.

Index Terms—Artificial intelligence, Android, Image Processing.

I. INTRODUCTION

Artificial intelligence is slowly making its way onto Smartphone's and may be staple feature on devices in 2018 Many Smartphones released in the past year have included AI-focused hardware and software, from Google's Pixel phones to Apple's iPhones to Huawei's Mate line These phones use AI in all sorts of clever ways, from imaging and photography, power efficiency to security. There have been AI developments from pretty much all of the major tech companies. Those who have not been in the AI game are expected to soon introduce smart phones with special functions.

Artificial intelligence is any task performed by a program or a machine that, if a human carried out the same activity, we would say the human had to apply intelligence to accomplish the task. That obviously is a fairly broad definition, which is why you will sometimes see arguments over whether something is truly AI or not.

AI systems will typically demonstrate at least some of the following behaviors associated with human

intelligence: planning, learning, reasoning, problem solving, knowledge representation, perception, motion, and manipulation and, to a lesser extent, social intelligence and creativity.

AI is ubiquitous today, used to recommend what you should buy next online, to understand what you say to virtual assistants such as Amazon's Alexa and Apple's Siri, to recognize who and what is in a photo, to spot spam, or detect credit card fraud and currently AI plays vital role in smart phone world.

II. AI IMPLEMENTATION ON DIFFERENT SMARTPHONE BRANDS

A. GOOGLE (Pixel devices)

Google Pixel is a brand of consumer electronic devices developed by Google that run either Chrome OS or the Android operating system. The Pixel brand was introduced in February 2013 with the first-generation Chromebook Pixel. The Pixel line includes laptops, tablets, and smartphones, as well as several accessories.



Figure 1. Google Pixel device

B. APPLE (iPhone)

The iPhone is a smartphone made by Apple that combines a computer, iPod, digital camera and cellular phone into one device with a touchscreen interface. The iPhone runs the iOS operating system, and in 2021 when the iPhone 13 was introduced, it

offered up to 1 TB of storage and a 12-megapixel camera.

The original iPhone was announced on Jan. 9, 2007, at the Macworld convention by Apple co-founder Steve Jobs. While it was not considered the first smartphone, the iPhone has helped drive the global shift to mobile computing among both consumers and businesses. Its primary rival has been Google Android-based devices from companies such as Samsung, also introduced in 2007.

C. SAMSUNG (GalaxySseries and Note line up)

Samsung, South Korean company that is one of the world’s largest producers of electronic devices. Samsung specializes in the production of a wide variety of consumer and industry electronics, including appliances, digital media devices, semiconductors, memory chips, and integrated systems. It has become one of the most-recognizable names in technology and produces about a fifth of South Korea’s total exports.

III. APPLICATION OF AI ON SMARTPHONES

- Face recognition (Security purpose)
- Google’s voice assistant
- For Natural language recognition
- Increase performance
- Battery efficiency
- Improvement in camera department
- Better understanding towards real world

IV. THREATS INVOLVED IN USING ARTIFICIAL INTELLIGENCE

- An AI created the Imaginary World for the Students with their Smart Phones.
- Students are connecting with their selected friends at anytime and anywhere, but they are unconnected with the people around them like parents and relatives.
- Students know much Information through the various social media, they are aware of the public issues, but they are not ready to know the reality of the information.
- Some of the memories become threatening equipment for the Crimes.

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V. RANKS OF SECURITY FEATURES OF AI

Table 1. Security features of AI

Security features	Mean Score	Ranks
Face lock	3.12	4
Finger lock	2.62	1
Pattern lock	2.64	2
Number lock	2.76	3
Voice lock	3.38	5
Pin lock	3.50	7
App lock	3.45	6

It is indicated that the security features of AI to protect user’s data and other information. Finger lock is ranked first with a mean Rank of 2.62, followed by Pattern lock with a mean rank of 2.64, next number lock with a mean rank of 2.76. Face lock has been ranked fourth with a mean rank of 3.12; next Voice lock has been ranked fifth, App lock ranked as Sixth, Pin lock ranked as Seventh.

VI. EFFICIENT USAGE OF ARTIFICIAL INTELLIGENCE

- Communication - Connecting people in just a minute without border barriers is one of the most advantages achieved through Artificial Intelligence.
- Transformation - Transformation from paper to paperless world is now becoming possible through the use of Artificial Intelligence Green Environment, and Digital Environment can be easily achieved in the future.
- Navigation - Searching the various unknown locations becomes easy by way of maps and reaching the particular area with a safe and secured manner can be possible through GPRS
- Knowledge - AI is a source of knowledge. Many search engines are helping the students’ community to gain knowledge in various subjects through their lecture notes, instructions, and demonstrations.

VII. SCOPE FOR FUTURE STUDY

- Because of the limited time and cost the study was conducted among the very few students (186) the study can be further extended by including some more number of respondents.
- Future studies can also include school students; now they are also using many applications for their study purpose and entertainment.
- The study can compare the students of various districts and states to know their efficient use of artificial intelligence.
- The future study can also compare the uses and the various applications used by school students with college students

VIII. CONCLUSION

AI is essentially changing the scenario by collecting real-time data and processing it. This enables mobile apps to learn each time an information exchange takes place among the devices so that they (apps) can finally take necessary action. In the future it is expected that smartphones with AI will be able to fully act independently and provide users with only the information they need based on their interests and habits. It is difficult to guess how exactly are we going to use these “extra smart” smartphones. Even now a smartphone with AI can drive a car; in the future, perhaps, its application will affect production processes.

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