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*MINI PROJECT*

*VOICE ASSISTANT*

*USING PYTHON*

*ABSTRACT*

* *Voice assistant are software agents that can interpret human speech and respond via synthesized voices. Apple’s Siri, Amazon’s Alexa and Google assistant are the most popular voice assistants which are embedded in smartphones or dedicated home speakers. Users can ask their voice assistant basic questions like( Time and Date etc ) , play music , open various applications installed in our system, opens our favourite websites, send or receive E-mails, perform Wikipedia search , play videos on YouTube, opens Web browser just by using our verbal commands.*

*INTRODUCTION*

* *Voice assistant using python is inspired by Apple’s Siri, Amazon’s Alexa and Google assistant.*
* *It is made using python with the help of various python modules and libraries.*
* *It uses voice recognition library to take command from user and then executes it.*
* *It uses pyttsx3 library to convert text to speech.*
* *It also uses various other python libraries like datetime (To tell current time and date) , Wikipedia (To perform Wikipedia search) , Webbrowser (To open Google , Youtube etc).*

*BACKGROUND STUDY*

* Voice assistants have a very long history that actually goes back over 100 years, which might seem surprising as apps such as Siri have only been released within the past ten years.
* The very first voice activated product was released in 1922 as [Radio Rex](https://ileriseviye.wordpress.com/2011/02/17/speech-recognition-in-1920s-radio-rex-the-first-speech-recognition-machine/). This toy was very simple, wherein a toy dog would stay inside a dog house until the user exclaimed its name, “Rex” at which point it would jump out of the house.
* IBM began their long history of voice assistants in 1962 at the World’s Fair in Seattle when [IBM Shoebox](https://www.ibm.com/ibm/history/exhibits/specialprod1/specialprod1_7.html) was announced. This device was able to recognize digits 0-9 and six simple commands such as, “plus, minus” so the device could be used as a simple calculator.
* In 2008, when Android was first released, Google had slowly started rolling out voice search for its Google mobile apps on various platforms, with a dedicated Google Voice Search Application being released in 2011. This led to more and more advanced features, eventually leading to Google now and [Google Voice Assistant](https://assistant.google.com/).
* Then, this was followed by [Siri](https://www.sri.com/sites/default/timeline/timeline.php?timeline=computing-digital#!&innovation=siri) in 2010. Developed by SRI International with speech recognition provided by Nuance Communications, the original app was released in 2010 on the iOS App Store and was acquired two months later by Apple.
* Then, with the release of the iPhone 4s, Siri was officially released as an integrated voice assistant within iOS. Since then, Siri has made its way to every Apple device available and has linked all the devices together in a  single ecosystem.
* Shortly after Siri was first developed,[IBM Watson](https://www.ibm.com/watson/about/) is announced publicly in 2011. Watson was named after the founder of IBM, and was originally conceived in 2006 to beat humans at a game of Jeopardy. Now, Watson is one of the most intelligent, naturally speaking computer systems available.
* [Amazon Alexa](http://alan.app/) is then announced in 2015. With Alexa, the Echo line of smart devices are announced to bring smart integration to consumers homes for an inexpensive route.
* [Alan](http://alan.app/) is finally publicly announced in 2017 to take the Enterprise Application world by storm. Being first born as “[Synqq](http://synqq.com/)”, Alan is created by the minds behind “Qik”, the very first video messaging and conferencing mobile app.
  + Alan is the first voice AI platform aimed at enterprise applications, so while it can be found in many consumer applications, it is designed for enterprises to be able to develop and integrate quickly and efficiently.

*TECHNOLOGY USED*

* *PYTHON : This mini project on voice assistant is built using Python . Python is an interpreted , high level and general-purpose programming language. It has a rich support for various libraries and modules. Various python libraries and modules which are used in this mini project are as follows:*
* *Pyttsx3*
* *Speech Recognition*
* *Wikipedia*
* *Datetime , Web browser , os , smtplib etc.*

Future of Voice Assistants

* **As AI becomes more advanced and voice technology becomes more accepted, not only will voice controlled digital assistants become more natural, they will also become more integrated into more daily devices**.
* **Also, conversations will become much more natural, emulating human conversations, which will begin to introduce more complex task flows. More and more people are using voice assistants too, as it was estimated in early 2019 that**[**111.8 million people in the US will use a voice assistant at least monthly, up 9.5% from last year.**](https://www.emarketer.com/content/us-voice-assistant-users-2019)
* Further Integration
* In the future, devices will be more integrated with voice, and it will become easier and easier to search using voice.
* For example, Amazon has already released a wall clock that comes enabled with Amazon Alexa, so you can ask it to set a timer or tell you the time.
* Natural Conversations
* **Currently, as users are getting more used to using voice to communicate with their digital devices, conversations can seem very broken and awkward. But in the future, as digital processing becomes quicker and people become more accustomed to using voice assistants in their everyday devices.**

Voice Assistant Timeline

* 1922 – First Voice activated consumer product hits store shelves as “Radio Rex”
* 1952 – Audrey, or the Automatic Digit Recognition Machine, is announced
* 1962 – IBM Shoebox is shown for the first time at the State Fair
* 1971 – Darpa funds five years of speech recognition research and development
* 1976 – Harpy is shown at Carnegie Mellon
* 1984 – IBM releases “Tangora” the first voice activated typewriter
* 1990 – Dragon Dictate is released
* 1994 – Simon by IBM is the first modern voice assistant released
* 2010 – Siri is released as an app on the iOS app store
* 2011 – IBM Watson is released
* 2012 – Google Now is released
* 2014 – Amazon Alexa and Echo are released
* 2015 – Microsoft Cortana is released
* 2017 – Alan is developed and released with the Alan Platform