## **Google Assistant**

Google assistant is a virtual assistant developed by Google to allow a two way interaction between the user and machine. The technology allows users to accomplish certain tasks such as get answers to questions and also control at home devices with the power of voice commands or text commands.

Google assistant uses advanced Natural Language Processing techniques and machine learning algorithms to grasp queries posed by the user and gain a thorough understanding of their intent. Google assistant can understand a wide range of different commands and questions allowing users to communicate with their devices as if they were speaking to a person. Google assistant uses speech recognition technology to translate spoken words into text and then that is analysed using NLP algorithms, through this process the assistant is able to gain an understanding of the users intent and provide useful responses and carry out tasks that are required.

Google assistant is incorporated into many different devices such as phones, tablets, smart displays and other devices. It has the capability of accessing many different features such as calendar, search and maps to name a few, this is to enhance the users daily routine and help accomplish tasks with greater ease which is also easily incorporated into the users day to day routine and makes it an invaluable tool.

Google assistant will use a wide range of tools to accomplish its end goal, these tools will include; Speech Recognition to understand what the user is saying, Natural Language Understanding which the transcribed text is then passed through Natural Language Processing algorithms to extract the relevant information, Intent Recognition to fully understand the users underlying intent, Context Awareness to maintain a flow of conversation and remember previous questions and prompts, and finally Personalisation, this is to give the user tailored recommendations and responses based on previous interactions and questions that have been asked.

Overall Google assistant is a powerful tool that is highly advanced in delivering a virtual assistant to users in a conversational and convenient way, through its Natural Language Processing techniques and machine learning algorithms it has become an invaluable tool for many people across the globe.