ALIS- ADVANCE LOGICAL INTELLIGENCE SYSTEM

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ABSTRACT

Our current scenario is dealing with a vast variety of technology, which is way more useful in our daily routine. Based on that the most trendy and popular technology is AI (Artificial Intelligence) and Machine learning (ML). The problem which we found and the way which we come here to focus is that in today's current scenario there is no such a device in which it can't use for multiple purpose (like defense, health-care, agricultural fields etc.)

So we bring a concept called "ALIS" which is basically a flexible platform to implement any kind of useful needs for human kind. We implement this concept using a ML which will train itself to understand human's behavior and needs.

Our proposed system ALIS will help the future world in case of routine life, health care and most importantly security. In the case of routine life, our system clearly gives the sophisticated way of use in their life, will be very useful in many aspect-like projects, gaining information, high advance security, etc. In the case of health care our system will be way more useful since machine behaves in human form it can tell our behavior through our emotions and detect our health conditions like monitoring. In the case of security, the data are secured using a crypto processing and admin provides an authentication key which will encoding and decoding using user and admin only. Our concept can combine with other technology to give solutions for other problems like combined with smart phones and produces a secured life and sophisticated life style for people combined with health care to produces a better health conditioned through 24/7 monitoring.

Key words: AI (Artificial Intelligence), ML (Machine Learning), SHA (Secure Hashing Algorithm)

1. INTRODUCTION

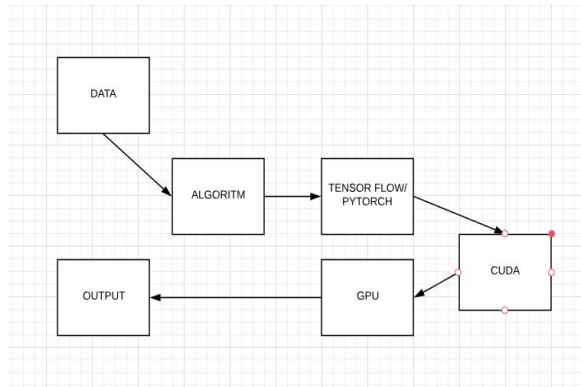### A. WHAT is AI?

AI is basically a technology who works like human and understand human emotions. This technology has such a wide range of opportunity and specialization to do with.

In this it includes traits such as knowledge, reasoning, problem solving, self- learning, etc. and giving them the actual feeling of humans is a difficult and tedious task.

In this a humanly behavioral object should do a lot of things in which it should identify the pattern of that particular vision. Needs several chips-based programming in which each kind of human actions like dance, song, karate, humor mode, etc. Initially it will be done in technical side by using some software tools to process the main part of human body and scanning them and adding them new features available for the process and insert all those programming in to this concept.

After the programs are installed on this human type system and test for the ability. When it hasn't any compiler errors then it is ready. The whole set up of human like system means a robot needs lot of computational powers and needs lots of process for the intake of all thing.

Figure 1: AI block diagram

Basically a data input and the algorithm will iterate check for the consequences and these will be send by the tensor flow for the real time programs which gives a turning point of real behavior and output prediction and computes all this and pass this to CUDA which is library based platform for the performance of the ML and for the computation we use GPU since by using this we get the output in fraction of second and finally our output will be obtained.
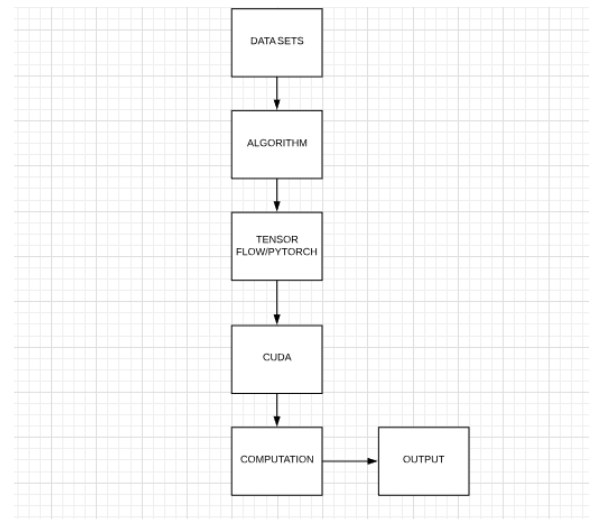
B. WHAT is ML?

Then ML (Machine Learning) is also a part of AI. Which gives them a complete action and the reality of the machines. Here we give machine a life for which to do all the action in real time applications. So we basically implement using the software tool like **Tensor flow, Py-torch** and python which is basics of ML.

In that several flows of programs needed for computation method of that system. As we done some work on that, the system itself train and further update its nature of developing in his environment.

By the self-updating capabilities, it can able to predict the future in fraction of second. By predicting

we can able to solve the problem with the correct solution so early as possible. As the data scientist with ML skills should study these algorithms and implement on the system. They use the deep learning concept which includes such a huge number of data for the computations. Neural networks are a part of ML in which the duplicated human or artificialized human should act and think like that by including these technologies.

Figure 2: ML block diagram

The project mainly deals with multiple purpose of virtual assistants. Now our surrounding is filled with high technologies in which one of the trendy technologies is virtual assistants which help people in a very efficient way. So here we take this as our priority because people are way more overly used product is virtual assistant. We have so many virtual assistants like Siri, Alexa, Google assistant, etc. People use this as a daily routine in the form of maps, guider, knowledge gainer, as a real time friend.

But there are some great drawbacks while using these AI's. Some may not give answers to factual question, some may take a lot time for replying, some may not answer it directly instead give a search bar, some may not answer which they require that specific language, all AI's have not face recognition and voice recognitions, security is way poor when comparing these assistants.

Some AI's took some large amount of time for responding in case of result as well as in the efficient way of functioning. When used in different project fields, we can't store those result for any other purpose. Corruption or manipulating will happen at slight change too. Now a day's people want to use every product in efficient manner in their comfort zone.

So, they too don't want to waste time or energy by using these, but also the product which we going to make them feel very comfortable and efficient. So, our proposed system will give them the entire satisfaction in terms of time, space, etc.

So, in order to avoid these, we introduce our product which helps people similar to real friend who can understand the feelings and emotions of a human. This will learn by its own since we use ML. These have required face and voice recognitions, and also it can be useful to implement in agricultural fields for automated secure plant system, in health care fields for instant and continuous health monitoring and also in defense and military for recon missions, surveillance etc.

2. MOTIVATION

The reason behind choosing this area is that, people always use trend technologies and they always concentrate on the highest tech as the world grows faster than we even not thought off. So we chose the most trending technology AI which will be the future world and applying a concept on this will lead us a great improvement in developing or creating an innovative idea of this product. Actually, the current scenario, virtual assistants takes a vital role in daily routine and applying some creative idea which makes customers life even more sophisticated. So mostly all virtual AI doesn't have a humanly behavior and they don't even have much security to provide. And most probably they don't even have face and voice recognitions. So the current system doesn't have these features. So we included all these high tech features which make everyone's life more easy and efficient.

3. SCOPE OF THE PROJECT

The real time real techie friend who performs everything as you said is what virtual assistants all about. The proposed system can make peoples life

painless and added more fun. The proposed system offers product description, pictures, comparisons, price and much more and the benefits of using this ALIS is that they will get a great humanly behavior who can understand the emotions and feelings. Humanly behavior is one of the important facilities provided in our ALIS virtual assistant, this lets customer to use as much functions they want, use a part of project, used for gaining knowledge, used as a guidance etc. This system will ensure safe mode and protect your details from other strangers using a strong database. Users are free to fill their feedback and give us a great review about this product. Users when not get satisfied can delete their account. Moreover, by using this system, users will gain a 100% satisfactory and sophisticated life. They can use that in the form of anything and since it is trained using machine learning it will learn by itself and will act as humanly manner, will get the result in fraction of seconds. It will progress to human behavior, will have 3-D face recognition and also can be more successful in predicting the outcomes of upcoming disasters or any other kind of situations, will be a great platform for the helping people for their needs.

4. PROBLEM STATEMENT

On the current virtual assistant, we don't have certain features like valid security, facial recognition, voice recognitions and also human behavior. These are few reasons which user needs and also to make their life even more sophisticated and also in current assistants we don't have the human understanding ability and also uses for the just conversational type.

5. PROPOSED SYSTEM

Our proposed system called ALIS (Advance Logical Intelligence System) which overcomes all the demerits of all the existing system and gains the advantages including new features which help people's life in sophisticated way. Our system mainly deals with the virtual AI which will be more useful and so much like humanly manner to people. Since we are coding theses using Machine Learning, our machine has the capabilities which learns themselves and also It will have face and voice recognitions which we included as a new feature, which improves a secure life for the people and also it will be a flexible environment which

predicts the outcomes and way more useful for the human needs in any fields.
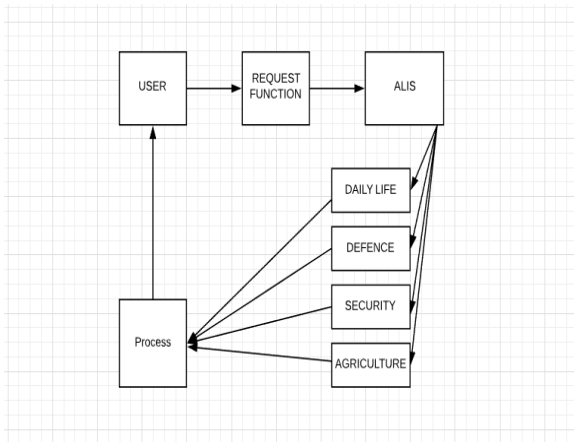
C. ADVANTAGES

● Will get the result in fraction of seconds

● It will progress to human behavior

● Will have 3-D face recognition, voice recognitions

● Predicts the outcomes for the given data

D. DISADVANTAGES

● Cost is comparatively high

● Little time consumption for the developing

6.   ALIS BLOCK DIAGRAM

Figure 3: ALIS Block diagram

Users will give a clear and exact view about the details and request for performing the function which user needs. Then our system ALIS will give provide the sufficient features for the user and process and in response and give back to the user.

If we need to use in real time applications like doing projects, want to use in agricultural fields for the security of growing plants from dawn to dusk and in health care it will be way more useful for the monitoring a human for 24/7 and alerting them whatever lacks in body and in the case of defense it will be way more useful for the surveillance acts and monitoring terrorist for other countries, etc. Now only Kerala faces a huge disaster of floods and for that also this platform is useful in which it can detect all houses which are fully drenched with water and also can take all data of people by processing the image of that particular human stored those details in secured big data.

7.   SYSTEM REQUIREMENTS

Here we need both software and hardware requirements to fulfil the concept which is going to implemented.

The software requirements are Windows10/Linux, since we are going to a reality to our machine, we use tensor flow, Py-torch, and python. Mainly the basics will be on python language.

For the hardware side we need data storage unit, which will be basically big data as a pointer to main storage system. In terms of security big data will be more efficient way of searching, retrieving and many other operations. Next, we use training machine for the machine itself have the capability to train the system for further requirements. Then other requirements are infrared, image sensor, ultrasonic, microphone and internet modules.

8.   MODULES

After the careful analysis the modules which we require is that **Administrator, Data center, Network, User**. Why we no need of other requirements because in this concept the real time application can be as such include as per the user requirements since machine is training itself.

Here each and every module do its own purposes. Administrator- performs multitasking, usually coordinates all its sublevels, gives modular security using **SHA** (Secure Hashing Algorithm) and crypto processing. The need of **crypto-processing** is that ensure an authentication key for the higher security purpose. Service support action will be performed for ensuring the service id done or not? If its not done will acknowledge an error message. Controls the data base, here admin plays a crucial role for arranging all types of details based on data type will be stored. It also has responsibility to create, view, delete, and update the database.

User will also give back the services which they provided and also have responsibility to maintain their account and also, they also want to produce their voice and face recognitions. The we have data center, in which we have a centralized data base for the and aa a pointer we use big data as a backup component, if any error happened in system.
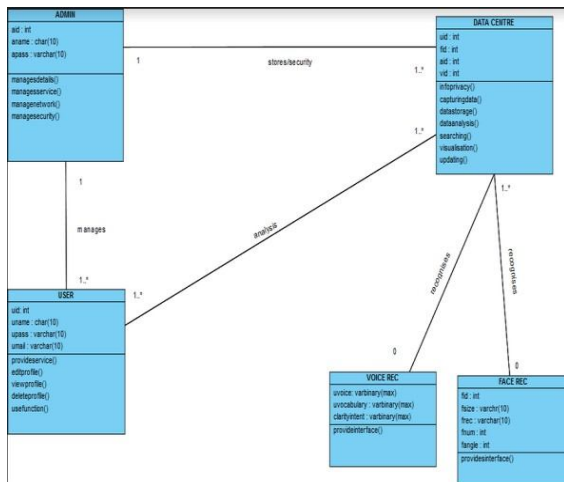
9. CLASS DIAGRAM

Figure 4: ALIS Class Diagram

Basically, the above diagram represents a class diagram which shows how the modules are arranged and its systematic way of functioning. The modules will as per the flow which we given.

10. SEQUENCE DIAGRAM

Here it shows the sequence way of how this system is functioning. Initially the users ask for the functions and if the entered function is correct it is done else it will acknowledge back to the user
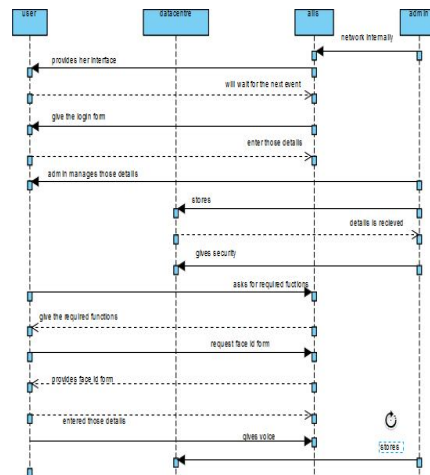

Figure 5: ALIS Sequence Diagram
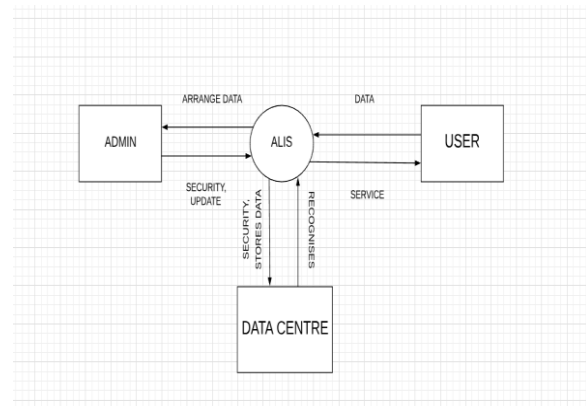
11. DATA FLOW DIAGRAM

Figure 6: ALIS Data Flow Diagram

In this user will asks for the requirements and it is fulfilled by the ALIS and service is provided and then ALIS will store all the information in a secured database and whenever required it will match and give the output.

Test Case id	Test Description	Input Data	Expected Result	Actual Result	Pass/Fail
Login	Enter the valid username& password and click the login button	Username and password	Display home page	Success	Pass
Registration	Check username, password, address, mail, num, etc	Username, password, num, addr, email, etc	Registration complete	Success	Pass
Facial	Check and verify face	Face2D,3D image	Verified	Success	Pass
Voice	Check and verify voice	Voice	Verified	Success	Pass
Contact Us	Store the feedback	Messages	Messages are stored	Success	Pass

12. CONCLUSION

The concept entitled **ALIS** was completed successfully. This project helped us in gaining valuable information on several topics such as functions of an **ALIS** and it also helped us to determine the problems faced by the users while using the current system. In this concept we tried to bring out an efficient solution to all the existing problems in the current system. By implementing this we can able to ensure all types of security and as the machine train itself, it will be way more sophisticated life for humans and also for further problems, the user can add sufficient requirements for the further use on agricultural fields, defense, health care etc. Its basically all real time application implemented on a single and flexible platform.

13. FUTURE SCOPE

Our proposed system ALIS will help the future world in case of routine life, health care and most importantly security. In the case of routine life, our system clearly gives the sophisticated way of use in their life, will be very useful in many aspect-like projects, gaining information, high advance security, etc.

In the case of health care our system will be way more useful since machine behaves in human form it can tell our behavior through our emotions and detect our health conditions like monitoring. In the case of security, the data are secured using a crypto processing and admin provides an authentication key which will encoding and decoding using user and admin only. Our project can combine with other technology to give solutions for other problems like combined with smart phones and produces a secured life and sophisticated life style for people combined with health care to produces a better health conditioned through 24/7 monitoring

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