MANSI: Software for Artificial Intelligent and Neurons of Machine

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Abstract: *This article describe the making way of framework Mansi, fully known as Software for artificial intelligence and Neurons of Machine. This paper contain only abstract way of implementation of how to make various open source technology together to achieve one goal. Main AIM to design such tool is   study of various algorithm, making AI based system, providing single platform where all   Image, Audio, Text related lib are available user has to make implementation of that. At Final stage we can use this system as AI based OS. This paper also review various tool use in.*

Key Words: *A.I. Based Operation system, Platform for AI Development*

1. INTRODUCTION:

MANSI is an Acronym for Software for Artificial Intelligence and Neurons of Machine. This project is initiated as the learning tool as well as a development framework for A.I. This VMWare file would contain various open source tool for Image processing, Machine Learning, Algorithms for Classification, Voice to text and Text to Voice.

Mansi is Ubuntu [1] based OS, having various application can communicate with other devices as well. Having ability of Self learning, face recognition, voice recognition, Talk back, Mansi can perform calculation or can follow your order. Perfect platform in order to develop personal assistant.

2. ABSTRACT OF IMPLEMENTATION:

Figure 1: Abstract of Implementation

Key Technology used

1. .SH is bash script (Shall Script) to run any other .Jar (Java Archives file) or Other .SH file
2. .JAR is Program created for any purpose using java technology, making infraction with .so or Native library.
3. .SO is Native library build in other language (like C/C++) over Linux platform. Many

libraries required to compile during installation.
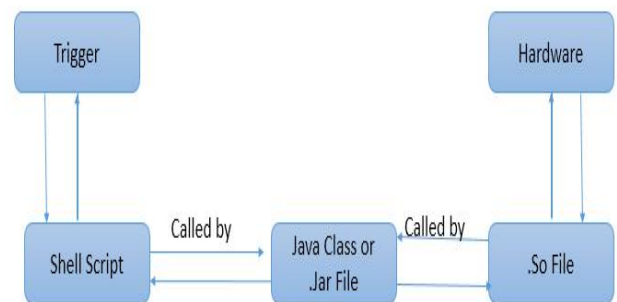
How this key technology interacts with each other?

Figure 2: Interaction between script and java file and flow of execution.

Who will trigger?

Trigger will be executed by OS itself mostly but user of application also trigger that. Which is known as CronJob, to view and Edit Cron in Type in Terminal.

  i.   Open Terminal with SU
  ii.   Crontab –e
  iii.   Start editing (#MANSI Edit)

Here trigger is instruction given by OS, user or application to System to perform specific task.

Cron Contains two job one at trigger at startup of System (after booting OS). Second Every 5 Minute (User can specify as per his/her requirement) to perform respective job like Checking mail, Message, Learning, Reading RSS.

Top Startup Script

onStartUp.sh and *Runnme.sh* are Shell script which trigger various .Jar or another Shell script.

onStartup.sh: will get trigger at startup by cron after booting. Which will start Main server. Its Located in: /onStartup/onStartup.sh

Runme.sh: will be get trigger at every 5 min (default) to perfume respective task. Its Located in: /daily/Runme.sh

Code Cron Contain to run the Top Startup Script

i. Open Terminal with SU
ii. Crontab –e
iii. Under the Line "#MANSI Edit"
iv. @reboot source /onStartup/onStartup.sh
v. Ctrl+x and Press 'Y'
vi. Type in Next Line   "*/5 * * * * source /daily/Runme.sh"
vii. Ctrl+x and Press 'Y'
viii. Close

Here Step IV: Trigger the Even on startup, Step VI: will trigger event at every five minute.

3. Directory Structure of PROJECT MANASI

Current development contains two type of main Directory.

i. **/manasi:** This folder contains only Jar, .Sh and Lib for Final execution.
ii. **/home/MANASI/Netbeans Project:** Here we develop different Project using Net Beans tool, Generates JAR or SH (If required). Make new Folder with Relevant name in folder [i].

Hierarchy of Directory

/				
	MANASI			
		Read Mail		
		Command		
		Client		
		Daily		
			(Runme.sh)	
		Ear		
		isNetWorking		
		Learn New Stuff		
		onStartUp		
		Server (MansiServer)		
			(onStartUp.sh)	
	Home			
		MANASI		
			NetBeans Project	
				cmdRunner
				EAR
				Face Recognization
				httpClient
				isNetWorking
				ManasiChat
				Manasi Server
				OCR
				ReadMail
				Revese AIML

Figure 3: Directory Structure of Project MANASI

4. FOLDER DESCRIPTION:

4.1.   Command folder:
Lib: Not Included
Send Command to various program using sh File.

4.2.   Ear
Lib: CMU Sphinx [2]
CMU Sphinx is open source toolkit build in c to convert voice to Text. While "Sphinix4" modifiable recognizer written in java. User of system can hear as per his/her voice. MANSI System come with pockateSphinx and Sphinxtrain to train the System as per user requirement.

4.3.   Face and Object Recognition
Lib: OpenCV [3]
This folder has java implementation of various code related to Face detection and Object reorganization, here we are using OpenCV which support java based codding [3] OpenCV is an open source computer vision and machine learning software library. This library contain 2500 algorithm for computer vision and machine learning. Here we will classify the images if it contain text then convert it into the TEXT, Recognize face and Object.

4.4.   HttpClient (Client)
Lib: eSpeak [4]
This Folder contain java program to send text to 'MANSI' of Mansi Server. Text coming for server will be get converted to command to "Command" folder or Spoken responses.

4.5.   isNetWorking
Lib: NA
One of the working example of implementation in java for checking whether net is working or not?

4.6.   Mansi Server:
Lib: Project AB[5]/ AIML Based Robot
This Program run as Server and GET Http Request as Question, and Reply accordingly to HttpClient. We can Create Tomcat server as well for better stability.

4.7.   OCR
Lib: OpenCV[3] and tesseract[6]
This Folder contain code to convert image to text. Also we can write code if particular sequence comes in image what to do with it? Like: if Image Contain Question then send text to "MansiClient" Mansi Client send it to "MansiServer". It will provide answer. If Regular text come them generate Reverse AIML and submit to server.

4.8.   Read Email
Lib: mail.jar
Another Example of implementation of mail reader, which intimate user if new mail arrived.

4.9.   Reverse AIML
Lib: NLP Lib from Stanford-corenlp [7]
It will read sentences and convert sentences to question as well as AIML File.

List and Discretion tool used in Project

1. AB.jar (AIML based Robot) [5]
2. CMU Sphinx [2]
3. OpenCV [3]/ tesseract [6]

Note:
.SH and.jar file sometime need permission for execution. To provide full flag permission with the code.

Open terminal

*$<part of the DIR> chmid +777 *.sh*
*$<part of the DIR> chmid +777 *.jar*

5. CONCLUSION:

As this paper is describe the whole internal structure of project Mansi. This is an open source project for researcher, developer and Hobbyist for AI. This project not having its own kernel, but having integration of various open source project described in "TITLE". User can make smart system using this platform.

6. FUTURE:

This paper describe little idea about platform but we can improvise this system with various system like instead of application we can use web services, system can be loaded with python and tensourFlow [10]. System also can have its own kernel which replace label of "Ubuntu" Where user can make its own Label OS Describe movie "HER" [11]

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