Jarvis:
The Personal Assistant for Linux

Under the Guidance of:
Mr. Manoranjan Panda

Team Members:
Harkishen Singh
Muskan Khedia
Jayashree Panda
Subham Mishra
Ankit Singh

<u>Aim</u>

This software aims at developing a personal assistant for linux-based systems. Currently, the purpose of the software is to perform the tasks of the user at certain commands, provided in either of the way, speech or text. It will ease most of the work of the user as a complete task can be done on a single command. Jarvis draws its inspiration from Virtual assistants like Cortana for Windows and Siri for iOS.

Project Overview

Jarvis -
1. Fulfils the lack of a virtual assistant in Linux systems
2. Has an easy to install and use interface
3. Communicates process using voice or text
4. Automates tedious tasks like deployment, unit testing through a single commands
5. Completely free to use.

Roles Played By Jarvis:

1. *Search Engine with Voice Inputs*

2. *Live Weather Updates*

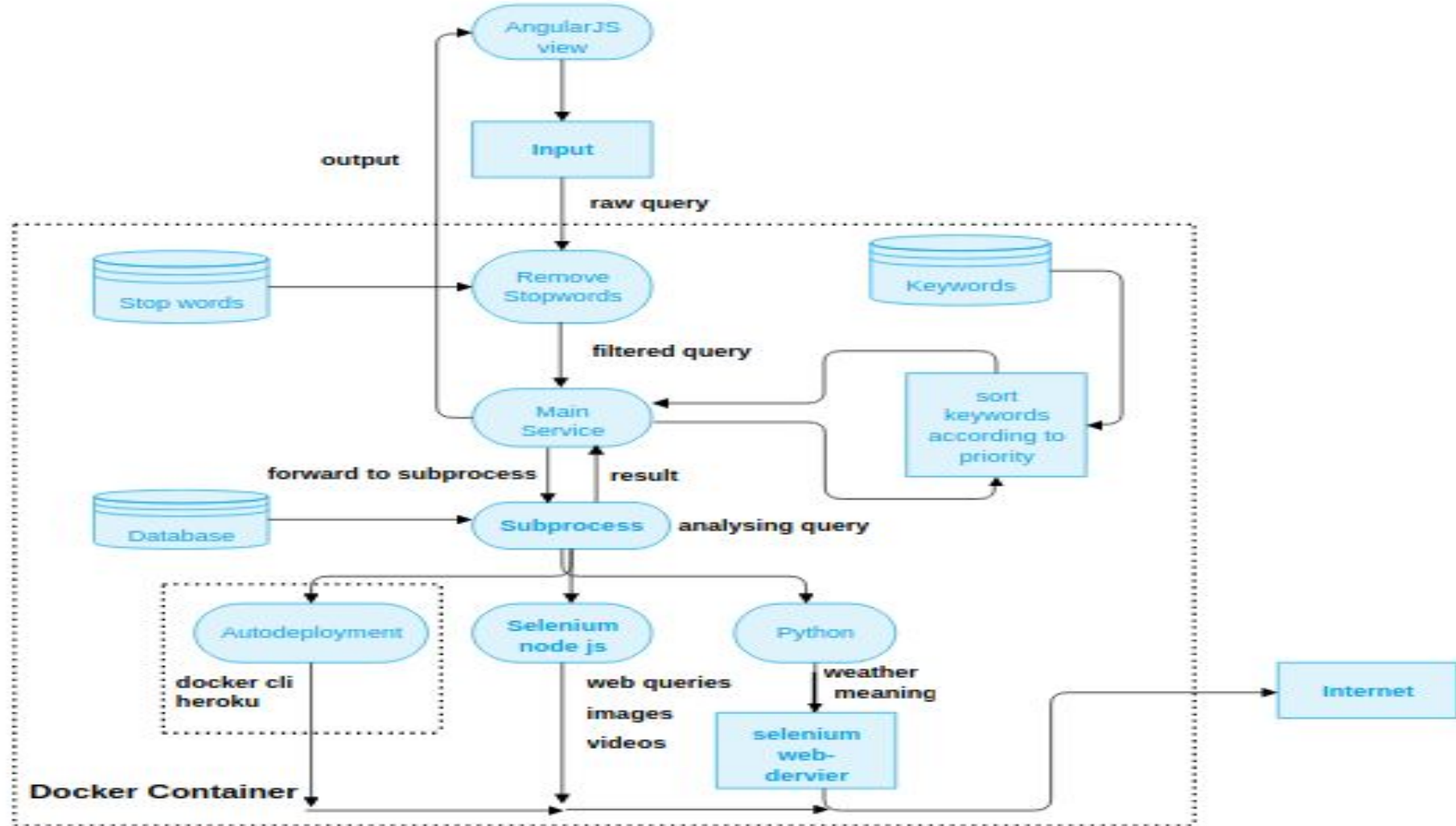3. *Retrieving images and videos from the web.*

4. *Sending Mails*

5. *Medical Diagnosis and aid*

6. *Reminder and To-do app*

7. *Auto-deployment of services using docker on heroku*

8. *Vocabulary help*

AngularJS view

output

Input

raw query

Stop words → Remove Stopwords

Keywords

filtered query

Main Service

sort keywords according to priority

forward to subprocess

result

Database → Subprocess — analysing query

Autodeployment

docker cli heroku

Selenium node js

Python

weather meaning

web queries images videos

selenium web-dervier

Internet

Docker Container

Features in Jarvis

Features in Jarvis

1. **Queries from the web:**

- We have used Node JS and Selenium framework for extracting the result from the web as well as displaying it to the user. Jarvis supports a plethora of search engines like *Google*, *Bing* and *Yahoo* and displays the result by scraping the searched queries.
- In order to make queries from different search engines, the given format should be adopted:

    <search engine> *<query>*

    Jarvis supports *Google, Bing* and *Yahoo*, which should precede the desired query.

Utilities Hub

Get Help on pre-defined Statements

Chat Screen

google apj abdul kalam you 23:36

here are the top search results jarvis-bot 23:36

1. A. P. J. Abdul Kalam - Wikipedia

https://en.wikipedia.org/wiki/A._P._J._Abdul_Kalam

2. Dr.APJ.Abdulkalam Official Website | Dr.Kalam Speeches | Dr.Kalam ...

www.abdulkalam.com/

3. A.P.J. Abdul Kalam | Biography & Facts | Britannica.com

https://www.britannica.com/biography/A-P-J-Abdul-Kalam

4. Dr. A P J Abdul Kalam :: BrahMos.com - BrahMos Aerospace

www.brahmos.com/people.php

5. A.P.J. Abdul Kalam | Biography & Facts | Britannica.com

https://www.britannica.com/biography/A-P-J-Abdul-Kalam

6. Let's remember former President APJ Abdul Kalam on his birthday ...

https://m.economictimes.com/news/...apj-abdul-kalam-on...kalam/.../66211753.cms

7. A.P.J. Abdul Kalam: Biography, Books, Quotes and Awards

Type a message

Send

Features in Jarvis

2. **Accessing Youtube Videos:**

- Jarvis implements the feature through a subprocess module which is handled by the main Golang service. This service initiates the subprocess for Node JS which serves the *Selenium WebDriver*, and scraps the searched *YouTube query.*

- In order to access videos from youtube format is:

    Youtube *<video you want to search for>*

Jarvis : The personal assistant

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[Get Help on pre-defined Statements]

Chat Screen

here are the top search results jarvis-bot 0:5

1. Jab Himmat Tute Tab Kya Kare? By Sandeep Maheshwari

https://www.youtube.com/watch?v=4-NiO3tq8mw

2. Mind Ko Relax Kaise Kare? By Sandeep Maheshwari

https://www.youtube.com/watch?v=BYc4ipPBuaA

3. Dar Se Mat Daro - By Sandeep Maheshwari

https://www.youtube.com/watch?v=LBB_Yzb7Bi8

4. Akelapan Dur Kaise Kare? By Sandeep Maheshwari

https://www.youtube.com/watch?v=piyhZoOaDag

5. Khud Ko Samjho - By Sandeep Maheshwari

https://www.youtube.com/watch?v=ItIN53hRAXw

6. Don't Waste Your Time - By Sandeep Maheshwari I Hindi

https://www.youtube.com/watch?v=AwRfvtCpdiQ

7. Apne Mind Ko Shant Kaise Kare? By Sandeep Maheshwari

[Type a message] [Send] 🎤

Features in Jarvis

3.   Get weather for a location:

● Jarvis addresses this issue with the help of Python.

● To get the weather at any location format is:

         Weather *<city> <state/country>*

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Chat Screen

Get Help on pre-defined Statements

weather bhubaneswar odisha you 0:7

here are the current weather conditions at bhubaneswar jarvis-bot 0:8

Currently 28 °C
Feels like 33 °C
Humidity being 87 %
Visibility 4 km
Dew Point 26
At time 2019-04-14 00:07:58.165705

Type a message

Send

Features in Jarvis

4.   Retrieve images:

- Users could get images directly through the Jarvis interface. This implementation is done using the Selenium WebDriver. The images are derived as iframes from the entire web code received from Google images. These are formatted according to use and displayed in a compact manner in the Jarvis interface.
- For retrieving images format is,

  image \<search>

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Chat Screen

Get Help on pre-defined Statements

image m s dhoni you 0:9

here are the searched images jarvis-bot 0:9

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Features in Jarvis

5. **Dictionary Meaning:**

- One of the usages of the web is to find word meaning and its usage in our day to day life. Users can search for it using the voice assistant and get the meaning within a fraction of second.
- For retrieving the meaning of a word format is,

    meaning *<word>*

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Get Help on pre-defined Statements

Chat Screen

meaning ecstasy you 17:53

here is the meaning of the searched word jarvis-bot 17:53

1. An overwhelming feeling of great happiness or joyful excitement.
   Example: There is a freedom, thrill and ecstasy associated with being employed which is indescribable.

2. An emotional or religious frenzy or trance-like state, originally one involving an experience of mystic self-transcendence.
   Example: Stigmatics often receive religious visions or ecstasies, having visions of Christ and various saints, and also re-living or seeing parts of Christ's passion and sharing in his suffering.

3. An amphetamine-based recreational drug having euphoric effects, typically taken in the form of a pill and particularly associated with clubbing and dance music subcultures.
   Example: Police arrested him and found a tablet of ecstasy in his pocket.

Type a message Send

Features in Jarvis

5.   Retrieving Medicine details and Symptoms

    A.   Medicine Details

        Get the complete details of the medicine, including :

1. Indications
2. Contradictions
3. Trade/Brand Names
4. Dosage
5. Process of consumption
6. Warnings and Precautions related to the medicine
7. Storage conditions

- For retrieving the details of the medicine, the format is:

        medicine *<name of the medicine>*

Utilities Hub

Get Help on pre-defined Statements

Chat Screen

medicine paracetamol you 17:52

Information about the medicine :
 India :
Thermia M Forte
International :
Tylenol,Tylophen, Panadol, Valadol
This medication is a non-opiate, analgesic and antipyretic, prescribed for headache, pain (muscle ache, backache) and fever either alone or combined with other medications. It changes the way the body senses pain and cools the body.
Hypersensitivity.
Adults: 0.5-1gm, 3-6 times daily max 4gm. Children: 15mg/kg/dose or 60mg/kg/24hr divided every 6 hrs. Maximum 5 doses SOS.
It comes as a tablet and liquid to take by mouth, with or without food.
 Caution should be exercised in patients with history of asthma, bleeding problems, growths in the nose, heart, kidney or liver disease, liver inflammation, high blood pressure, chickenpox, anxiety, trouble in sleeping, ulcers, stomach problems, stroke, Kawasaki syndrome, any allergy, who are taking other medications, during pregnancy and breastfeeding.

• Avoid alcohol consumption.

• It should not be used in children with infections such as flu, chickenpox or viral infections.

• Avoid large amount of caffeinated beverages while taking this medication.

• It may reduce platelet counts; avoid injury or bruising.
Nausea, stomach upset, skin rash, acute toxicity may result in liver failure.
Avoid excess dosage.

Type a message

Send

Features in Jarvis

B.   Medicine Help based on symptoms

- List your noticed symptoms and get immediate help on the medicines that could be taken.
- For retrieving the medicine based on symptoms, format is:

    Symptoms <specify the symptoms>

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Get Help on pre-defined Statements

Chat Screen

symptoms headache you 17:56

Help on the given symptoms :
 Acetaminophen and Codeine
Acetaminophen and codeine is a combination of non-opiate and opioid (opium-like sleep inducing) analgesics used to treat patients with fever, headache and helps to suppress the cough symptoms by acting on the cough center in the brain.
Trade Names :
Narcogin Forte
Acetaminophen or Paracetamol
Acetaminophen or paracetamol helps to reduce fever and to relieve a headache with mild to moderate pain.
Trade Names :
Temptal | Ultramol | Tempros (500 mg) | Amidol | Ultragin | Ifimol | Indamol | Dolo (500 mg) | Crocin Quik | P -500
More...
Acetaminophen, Butalbital and Caffeine
Acetaminophen, butalbital, and caffeine combination are used to treat a tension headache caused due to muscle contractions.
Almotriptan
Almotriptan is prescribed to treat a headache caused due to migraine attacks with or without aura, a perception or sensitivity to light, strange noise, and unpleasant smell with confusing thoughts.
Aspirin
Aspirin is an analgesic and antipyretic, prescribed for pain, heart attack and fever.
Trade Names :
Dispirin | Modlip ASP | Nitrofix -AS | Vasoprin 150 | Vasoprin SD | Ecosmin (150 mg) | Solosprin (75 mg) | Ismorin | Solosprin | Vasoprin LS
More

Type a message

Send

Features in Jarvis

6. **Sending Emails**

- Integrating mailing features to Jarvis eases the job of mailing, which otherwise would have to be done by opening the concerned email address. The user can send emails to the desired receiver.
- User should input ***Send mail,*** after which a form will be displayed.
- Fill the form with the required details and click on the **send mail** button.

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Get Help on pre-defined Statements

Chat Screen

send mail you 17:54

Enter Mail details : jarvis-bot 17:54

Sender:

jayashreepanda12345@gma

TO:

muskankhedia2000@gmail.c

CC:

BCC:

Subject

presentation details

Body

Here are the presentation details

Send Mail

Type a message

Send

Features in Jarvis

7.   Set Reminders

- One of the main features of a voice assistant is to set a reminder for the user accordingly. The user can set reminders to be notified about a task at a particular time. This will help users, especially developers to schedule their time and resources easily.
- The user has to input ***Set reminder*** to the assistant.
- A form will be displayed. Fill the form with the required details and click on **set reminder** button.

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Chat Screen

Get Help on pre-defined Statements

set reminder you 17:53

Enter Reminder details : jarvis-bot 17:53

Title

presentation

Description

skill project presentation

Date and Time

15/04/2019, --:--

Set Reminder

Type a message

Send

Features in Jarvis

8. **Auto Deployment of cloud-services and complete the DevOps cycle**

- Automates the tedious task of deployment on Heroku containers
- Takes Heroku and Github credentials as Input.
- Initiates the Node JS subprocess which switches the Selenium browser and logs in the Heroku dashboard
- Currently, supported by only selected organisations like Kubernetes. This feature would make Jarvis one among the select, and possibly the first of its type in India.

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Chat Screen

deploy move-hack-angular *you 23:20*

Successfully deployed. Link to the hosted app https://enigmatic-tundra-73946.herokuapp.com/ *jarvis-bot 23:22*

Type a message

Send

Tech-Stack Used

FRONTEND FRAMEWORK

➢ AngularJS

BACKEND STACK

➢ GO-lang
➢ Docker Container

DATABASE

➢ SQLite
➢ Cookies

Future Perspectives and Plans:

- Integrating the web-app with mobile-app using React Native to provide a synchronized experience of all the processes of the mobile like messages, calls and notifications and notify in the web-app.
- Further, in the long run, Jarvis is planned to feature auto deployment supporting elastic beanstalk, backup files, and all operations which a general Server Administrator does. The functionality would be seamless enough to replace the Server Administrator with Jarvis.
- Native platform-independent Desktop Application for Jarvis.

Thank you.