HLENGINE

DEVELOPMENT

SIMPLIFIED

UBUNTU

python™

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Preface

I am very happy to announce that the HLRobotics has developed its own framework for the Software developers and Engineers. The framework will be called **HL_ENGINE.** This framework has been written over the python 3.6. The framework supports only on python ver 3.0 and above. The framework is written to make the work and development time much less compared to the conventional python coding. This will help the new coming or the freshers after reading the documentation on how to work with the HL_Engine more faster and in secure way.
The HL_Engine has been developed on UBUNTU 18.01 and has been made in such a way that it can support in different platforms like WINDOWS and MAC.
As a developer and designer of this HL_Engine framework, I suggest to use UBUNTU or any LINUX distribution for development application using this Engine.
The HLEngine will update by itself once it is installed.

Declaration:

The **HL_ENGINE** is the sole property of HL Robotics & Automation Community and shouldn't be used in any other application without the permission of the owner. This framework is built for the developers and the members of HL Robotics Community.

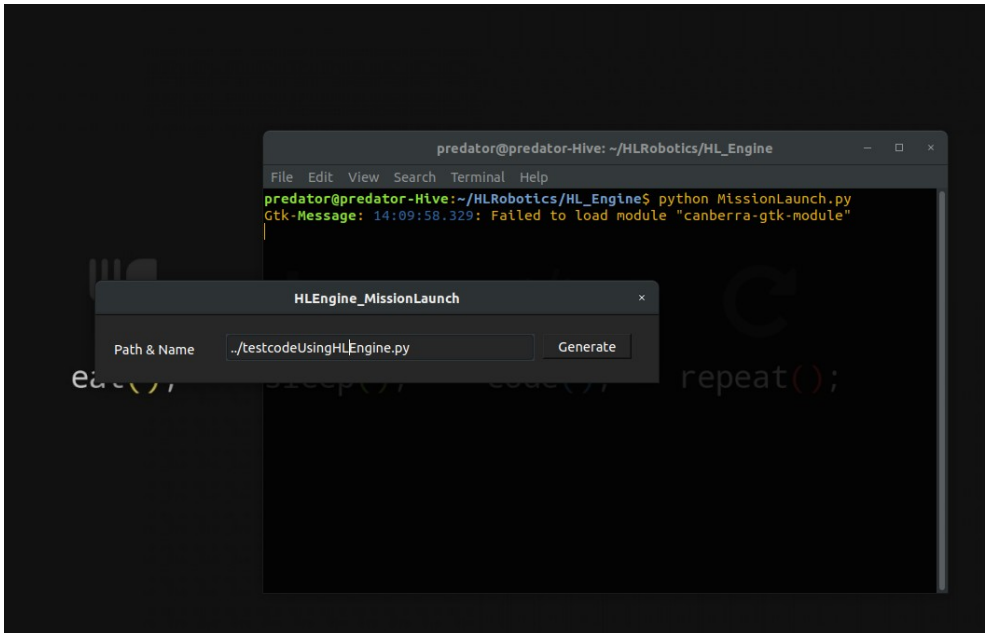
Akhil P Jacob
CEO & Sr. Software Engineer
HLRobotics Automation

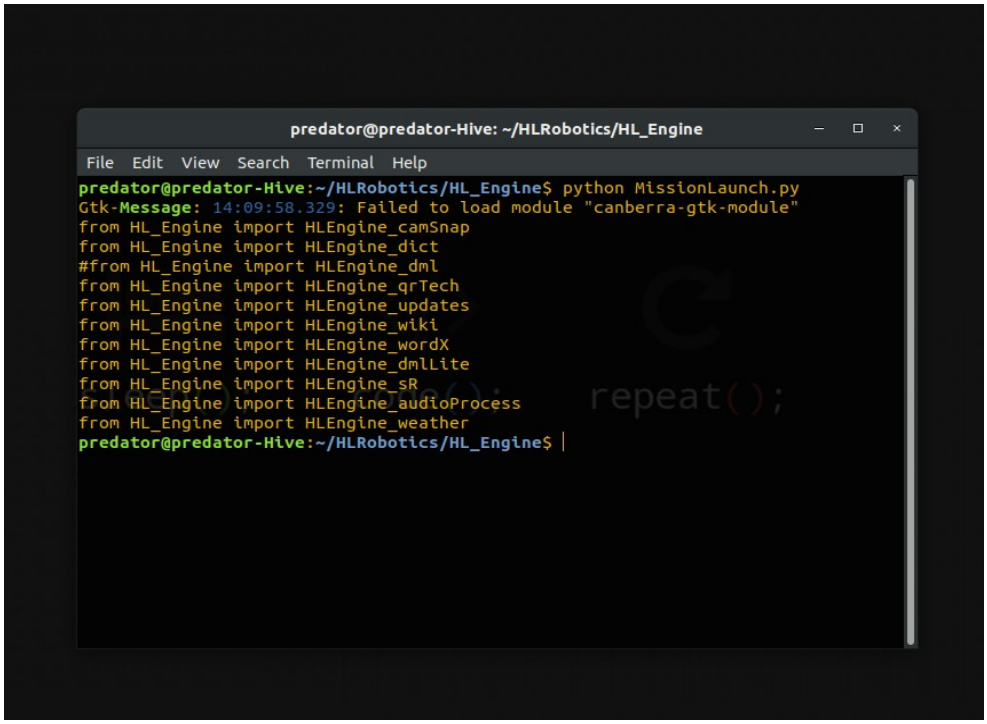
HL_Engine sub Libraries

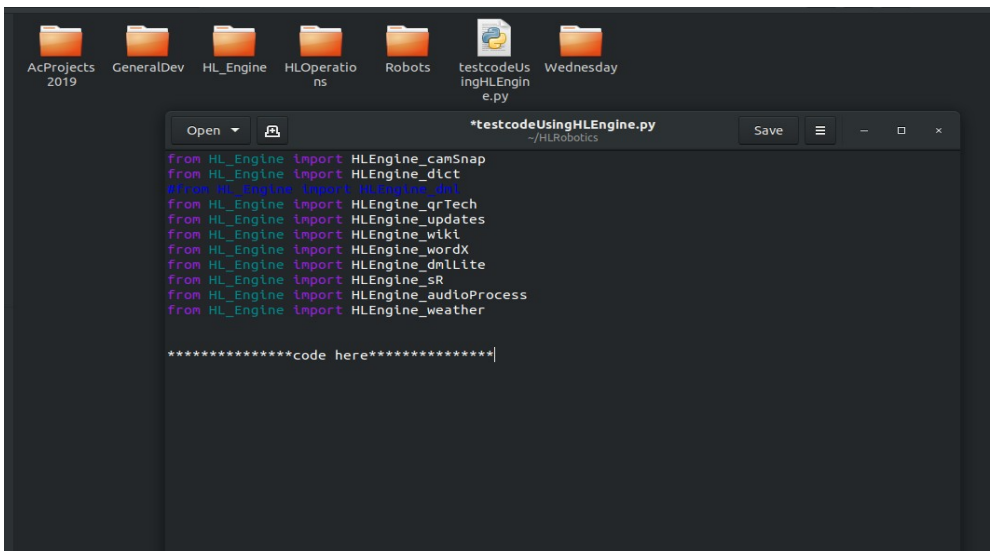
- ✔ **HLEngine_camSnap**
- ✔ **HLEngine_dict**
- ✔ **HLEngine_dml**
- ✔ **HLEngine_qrTech**
- ✔ **HLEngine_updates**
- ✔ **HLEngine_wiki**
- ✔ **HLEngine_wordX**
- ✔ **HLEngine_dmlLite**
- ✔ **HLEngine_sR**
- ✔ **HLEngine_audioProcess**
- ✔ **HLEngine_weather**
- ✔ **HLEngine_com_protocols**

How to start a project?

1. Install python3.6 and above
2. Download & Install the supported site packages library elements mentioned in sitepackages list below
   terminal commands eg:*python3 -m pip install whatever*
3. Download the HL_Engine from the website **www.hlrobotics.tech**.
4. Inside the HL_Engine run the MissionLaunch.py file using the command 'python MissionLaunch.py' in the terminal LINUX or double clicking in windows.
5. Give the path to your project, which should be filled like *"../filename.py"*
6. When you open the file, you can see all the HLEngine files have been imported as in figure below .
7. Code accordingly.


predator@predator-Hive: ~/HLRobotics/HL_Engine
File Edit View Search Terminal Help
predator@predator-Hive:~/HLRobotics/HL_Engine$ python MissionLaunch.py
Gtk-Message: 14:09:58.329: Failed to load module "canberra-gtk-module"
HLEngine_MissionLaunch
Path & Name
../testcodeUsingHLEngine.py
Generate


predator@predator-Hive: ~/HLRobotics/HL_Engine
File Edit View Search Terminal Help
predator@predator-Hive:~/HLRobotics/HL_Engine$ python MissionLaunch.py
Gtk-Message: 14:09:58.329: Failed to load module "canberra-gtk-module"
from HL_Engine import HLEngine_camSnap
from HL_Engine import HLEngine_dict
#from HL_Engine import HLEngine_dml
from HL_Engine import HLEngine_qrTech
from HL_Engine import HLEngine_updates
from HL_Engine import HLEngine_wiki
from HL_Engine import HLEngine_wordX
from HL_Engine import HLEngine_dmlLite
from HL_Engine import HLEngine_sR
from HL_Engine import HLEngine_audioProcess
from HL_Engine import HLEngine_weather
predator@predator-Hive:~/HLRobotics/HL_Engine$


AcProjects 2019
GeneralDev
HL_Engine
HLOperations
Robots
testcodeUsingHLEngine.py
Wednesday
Open
*testcodeUsingHLEngine.py
~/HLRobotics
Save
from HL_Engine import HLEngine_camSnap
from HL_Engine import HLEngine_dict
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from HL_Engine import HLEngine_dmlLite
from HL_Engine import HLEngine_sR
from HL_Engine import HLEngine_audioProcess
from HL_Engine import HLEngine_weather
**********code here**********

Code usages

HLEngine_audioProcess:

result=HLEngine_audioProcess.saveAudio(text,location)
used to convert text to mp3

result=HLEngine_audioProcess.playAudio(location)
*used to play an audio of any formats

result=HLEngine_audioProcess.readText(content to read)
*used to read the text

result=HLEngine_audioProcess.readTextSpec(content to read)
*used to read the text in special format

HLEngine_camSnap:

result=HLEngine_camSnap.camSnap(location)
*saves the photo in the location when x is pressed

result=HLEngine_camSnap.filter(filter,cam_no,frameName)
*do the filter based activities like face detection

HLEngine_dict:

result=HLEngine_dict.dict(word to search)
*return the meaning

HLEngine_dml:(mysql server)

host=ip address/localhost
db=db_name
user=root(default)
psd=" "(default)
query=mysql queries

result=HLEngine_dml_select(host,db,user,psd,query)
**returns the result*

result=HLEngine_dml_insert(host,db,user,psd,query)

result=HLEngine_dml_del(host,db,user,psd,query)

HLEngine_dmlLite:

result=HLEngine_dmlLite.dmlLite_create(dbname,query)
*create a sqlite db

result=HLEngine_dmlLite.dmlLite_insert(dbname,query)
*insert to a sqlite db

result=HLEngine_dmlLite.dmlLite_delete(dbname,query)
*delete from a sqlite db

result=HLEngine_dmlLite.dmlLite_findData(dbname,query)
*select a data from sqlite db

result=HLEngine_dmlLite.dmlLite_findAlldbname,query)
*select all data from sqlite db

HLEngine_qrTech:

result=HLEngine_qrTech.qrTech()
*scans qr code and returns result

HLEngine_sR:

result=HLEngine_sR.sR()
*returns the speechRecognized string

result=HLEngine_sR.sentiment(string_param)
*returns the polarity of sentiment string

HLEngine_weather:

result=HLEngine_weather.temp(place)
*returns the temperature in degree C

result=HLEngine_weather.sunrise(place)
*returns the sunrise time from gmt
result=HLEngine_weather.sunset(place)
*returns the sunset time from gmt

result=HLEngine_weather.wind(place)
*returns the wind speed and direction

HLEngine_wiki:

result=HLEngine_wiki.wiki(param)
*returns the result from wiki search

HLEngine_wordX:

result=HLEngine_wordX .FW(param)
*returns the first word from param string

result=HLEngine_wordX .EW(param)
*returns the end word from param string

result=HLEngine_wordX .Image_decode(location)
*returns the decoded string from the image shown

HLEngine_com_protocols:

result=HLEngine_com_protocols .serSend(port,rate,data)
*sends the serial data to the port and returns confirmation

result=HLEngine_com_protocols .serReceive(port,rate)
*returns the serial incoming data

result=HLEngine_com_protocols .sendMail(mailid,psd,to,msg)
*returns the acknowledgement of mail

Auxillary Python Libraries for Smooth Working

- ✔ pygame
- ✔ pyttsx3
- ✔ face_recognition
- ✔ cv2
- ✔ pyzbar
- ✔ zbar
- ✔ qrtools
- ✔ serial
- ✔ pillow
- ✔ git python
- ✔ wikipedia
- ✔ mysql
- ✔ sqlite3
- ✔ gtts
- ✔ smtplib
- ✔ PyDictionary
- ✔ git
- ✔ pyowm
- ✔ base64
- ✔ pyQt4
- ✔ nltk
- ✔ TextBlob

Engine updates will be automatic once it is published