Abstract

Due to the increasing presence of robots in several industries, human-robot interaction using natural language has become an important research area. The concept of controlling robots by transforming language instructions in English into executable code for robots is discussed. The proposed approach makes use of semantic similarity by comparing the given instruction with those within a corpus and executes the instruction most similar to the one given. The method is application specific but the modular nature of the system allows it to be adapted for any robot and for any purpose. For this project, a Raspberry Pi based robot following navigation commands is used for experiments and a success rate of 96% is observed.

References

7. RPi.GPIO 0.6.3. A module to control Raspberry Pi GPIO channels.
https://pypi.python.org/pypi/RPi.GPIO

Index Terms

Computer Science
Automated Systems

Keywords

Human-Robot interaction, NLP, LSA, semantic similarity.