

RECEPTIONIST ROBOT

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ABSTRACT

Receptionist ROBOT Service robots are playing an increasingly relevant role in society. Humanoid robots, especially those equipped with social skills, could be used to address a number of people's daily needs. Knowing how these robots are perceived and potentially accepted by ordinary users when used in common tasks and what the benefits brought are in terms, e.g., of tasks' effectiveness, is becoming of primary importance. Specifically focuses on receptionist scenarios, which can be regarded as a good benchmark for social robotics applications given their implications on human-robot interaction.

Keywords: Humanoid robots, Receptionist ROBOT, receptionist scenarios.

1. INTRODUCTION

Persistent progressions in the field of mechanical autonomy are making ready for a significant extension of use fields for such an innovation. Specifically, administration robots are turning out to be ever more commonplace in various day by day life exercises. Business items and research models incorporate robots utilized in home robotization settings, amusement, training, and elderly assistance applications, to name a few.

In a setting where robots are relied upon to be increasingly more coordinated into human environments to help and speak with average folks, humanoid robots highlighting social interaction practices will sensibly assume a key job, since their angle and usefulness may contribute at making them progressively satisfactory contrasted with different robots.

Though various robots with human highlights are as of now accessible, inquire about exercises are needed to modify their conduct dependent on the specific errands they are required to complete in the selected context, so as to guarantee consistency with end-clients' needs. Additionally, since these robots are going to work in human situations, exceptional consideration must be committed to build up their social attitudes and make their communication abilities as common as possible. This paper centers around a specific application situation that can be alluded to as "automated reception", in which a robot can be utilized to help individuals by giving bearings and pushing them to find the places of intrigue

An automated secretary can be viewed both as a Socially Interactive Robot (SIR), a definition coined by Fong et al. to allude to robots outfitted with social communication abilities as fundamental features, and as a Socially Assistive Robot (SAR), since it plans to give help to human clients through social interaction.

A number of works have just investigated the mechanical secretary space and, more in general, frameworks for bearing giving and wayfinding errands. Various arrangements have been developed, using, e.g., sound input, deictic (in the accompanying regularly proposed as arm pointing) gestures, route tracing on amp, socially intelligent typified (physical or virtual) frameworks, unembodied systems without social association abilities (like sound maps), and so on. Nonetheless, a methodology that can be regarded as a definitive answer for play out the considered errand has not been identified yet.

Thus, by moving from the above contemplations, the points of this paper are triple. Firstly, it endeavors to look at, through a client study, the ease of use and execution of secretary systems using the most encouraging ideal models found in the writing for bearing giving applications. To this point, a socially intelligent physical humanoid robot equipped for expressing headings and showing them on a guide is contrasted and a robot highlighting a similar epitome and social practices but leveraging signals (exactly, arm pointing) for giving headings. For fulfillment, the virtual adaptation of the last configuration was additionally thought of. Chosen frameworks, which will be later referred to as PRM (Physical Robot with Map), PRG (Physical Robot with Gestures), and VRG (Virtual Robot with Gestures) are appeared in Figure 1

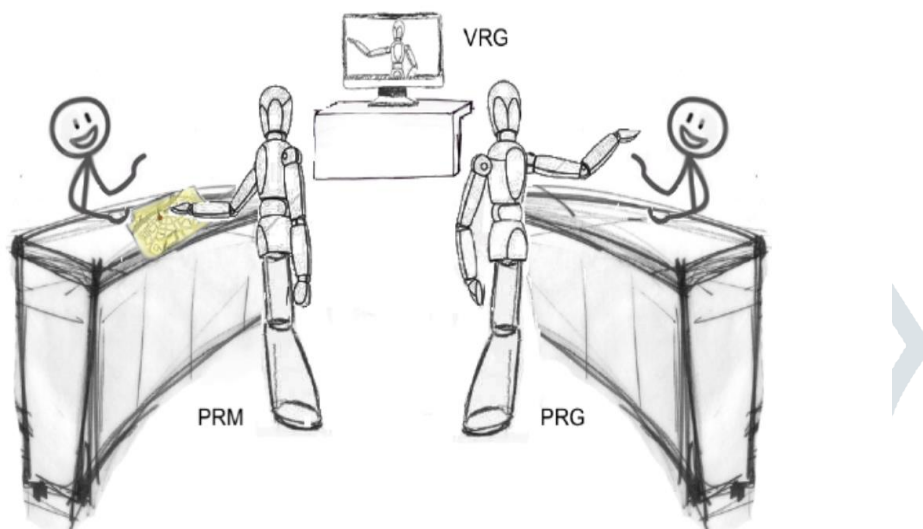


Fig No 1. Configurations considered in the first user study to evaluate the suitability and effectiveness. of direction-giving systems developed so far: PRM (Physical Robot with Map), PRG (Physical Robot with Gestures), and—for the sake of completeness—VRG (Virtual Robot with Gestures).

II. LITERATURE SURVEY

[1] In this exhibit, a humanoid robot connects with a questioner through discourse and signals all together to give headings on maps. The robot is put behind an assistant work area with a guide of the college grounds (or then again floor plan) sitting tight for potential conversationalists. Guests can move toward the robot and ask it in which heading to discover places certain. Discourse and furthermore deictic motions to areas on the guide between them can be utilized as a kind of perspective for the request. The robot in all cases utilizes both discourse and signal in its response to demonstrate the right course to the guests. The proposed show is a model on the best way to effectively improve a robot with social connection techniques in the space of spatial mindfulness for a superior client experience during human-robot association. Beside the exhibit meeting, the robot could likewise be introduced at the gathering front work area to serve the gathering members to discover their way to the following talk.

[2] Most social robot venture has attempted to make framework that perceive and show human feelings. Be that as it may, the scope of capacities showed by these robots is regularly found and depleted by individuals or maybe rapidly, and such robots don't keep up their clients' enthusiasm over the long haul. This is tricky for a robot that is arranged in a situation for quite a while. The creators suggest that blessing such a robot with character, character, and a story that changes after some time will keep individuals intrigued enough to give the robot with a constant flow of guests.

[3] Robots are potential possibility for performing assignments as assistants in exercises of every day needs later on: filling in as a secretary is one potential business. Be that as it may, the manner in which the secretary robot

ought to show up or sound and carry on should be siphon cautiously, so as to structure a robot which is acknowledged in a positive manner by typical individuals. This paper depicts an investigation on humanoid attribution of an assistant robot made for clients contingent upon the appearance and the voice of the assistant. The inspiration for this examination is to explore how an assistant robot ought to be intended to be utilized. Receptionists carry out a responsibility that is valuable as help for average citizens in regular day to day existence: an undertaking that can conceivably be performed by conversational specialists just as robots.

[4] This paper secured the structure and execution of three of the assistant robot's product modules: route and restriction, face recognition, and individuals' location. It distinguishes and moves toward individuals passing by its encompassing region, offering its administrations. Human-robot correspondence can be built up orally or by methods for a material interface. On the off chance that vital, the robot is fit for managing guests anyplace on the floor. The secretary robot venture is made out of two separate proposals. Aside from the assistant's origination and framework plan, which is basic to both, this paper centers around the robot's route and confinement module, just as on all the modules that utilize picture preparing, which are the face identification, and the individuals location modules

III. RECEPTIONIST ROBOT SYSTEM:

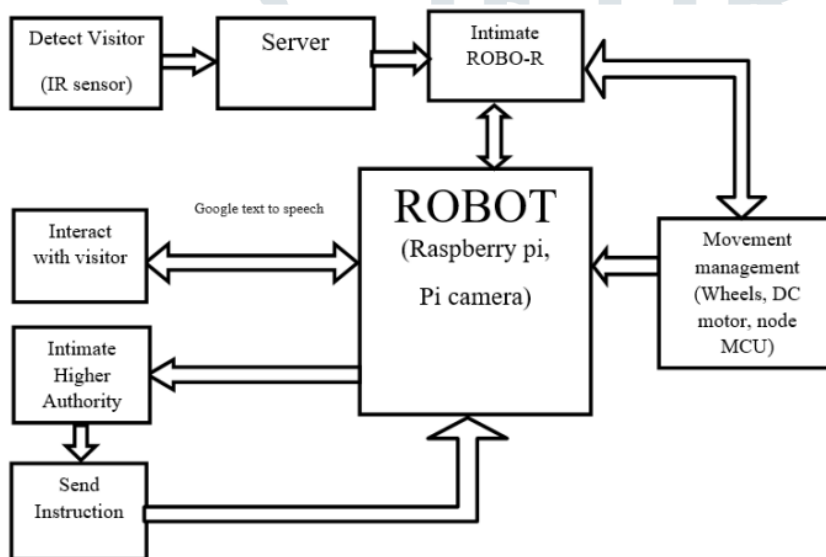


Fig No 2: Block Diagram for Robotic Receptionist

A. Distinguish Visitor

The robot is put at the gathering. At the point when any customer comes inside from entrance door, the identifier distinguishes them and imparts a sign to the ROBO-R by means of server. The ROBO-R in the wake of accepting the sign moves towards the passage and invites the customer.

B. Collaboration

When the guest enters the workplace, ROBO-R makes them to sit and begins collaborating with them. It takes the contribution from the customer in a tablet or a screen appended to the ROBO-R. In light of customer's question ROBO-R lingerie the concerned individual. When the concerned individual gets the notice in his android telephone, he can send the guidance to ROBO-R. In light of the guidance from the concerned individual, it passes on the message to the customer. ROBO-R catches the picture of all the customer with their subtleties and afterward transmits it to database.

C. Development

Every division comprise of various courses and each course contains a few focuses. In light of the guidance, the ROBO-R chooses a specific course and follows the equivalent. It begins from the principal purpose of the course and moves towards next point on a similar course. It alters the course from a point while moving towards the following point in view of the predefined guidance.

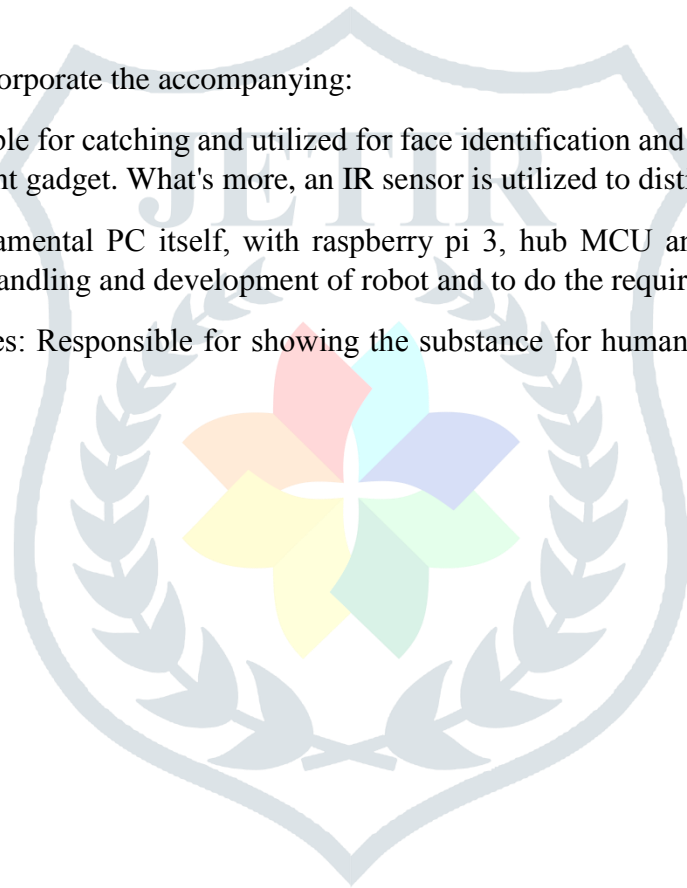
D. Second Visit

As referenced, the ROBO-R catches the facial picture of every customer alongside their subtleties and stores it in the database. During the second visit of the customer, the ROBO-R catches the facial picture of customer again and send it to its database. The picture is then prepared for its correlation with dark picture utilizing face acknowledgment calculation. In the event that match is discovered, it recovers the past visit data and dependent on that it begins cooperation

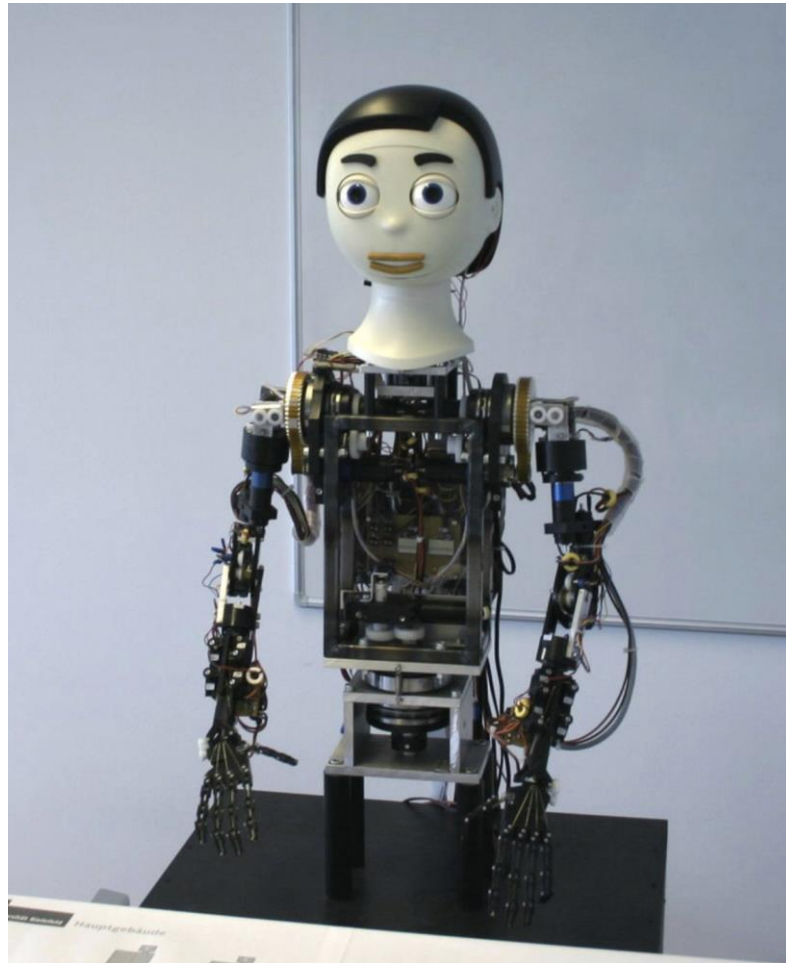
E. Hardware

The equipment parts incorporate the accompanying:

- Acquisition Device: Responsible for catching and utilized for face identification and face acknowledgment. Here, we use pi camera as the procurement gadget. What's more, an IR sensor is utilized to distinguish human developments.
- Processing gadget: The fundamental PC itself, with raspberry pi 3, hub MCU and arduino is liable for running programming that permits the handling and development of robot and to do the required undertakings.
- Display and Hardcopy Devices: Responsible for showing the substance for human review. It incorporates shading screen and android telephone



IV. RESAULT, CONCLUSION AND FUTURE SCOPE



The present context of work has brought out an application of robotic receptionist. This project addresses the issues, disadvantages of the primitive systems for receptionist and application-oriented management system. This project is simulated in the first phase. With this project implemented, there will be change in the outset of applying any technology according to its efficiency and reliability. This project proves to be working efficiently, cost effective and with low power features. This model is scalable infinitely and can prove the extensibility of the application.

Various applications of this project include

- Keeping a record of clients that visit the office.
- Guiding the clients to the respective concerned departments.
- Informing the concerned departments about the clients and fixing a meeting with them

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