

ROBOT FOR ELDERLY CARE

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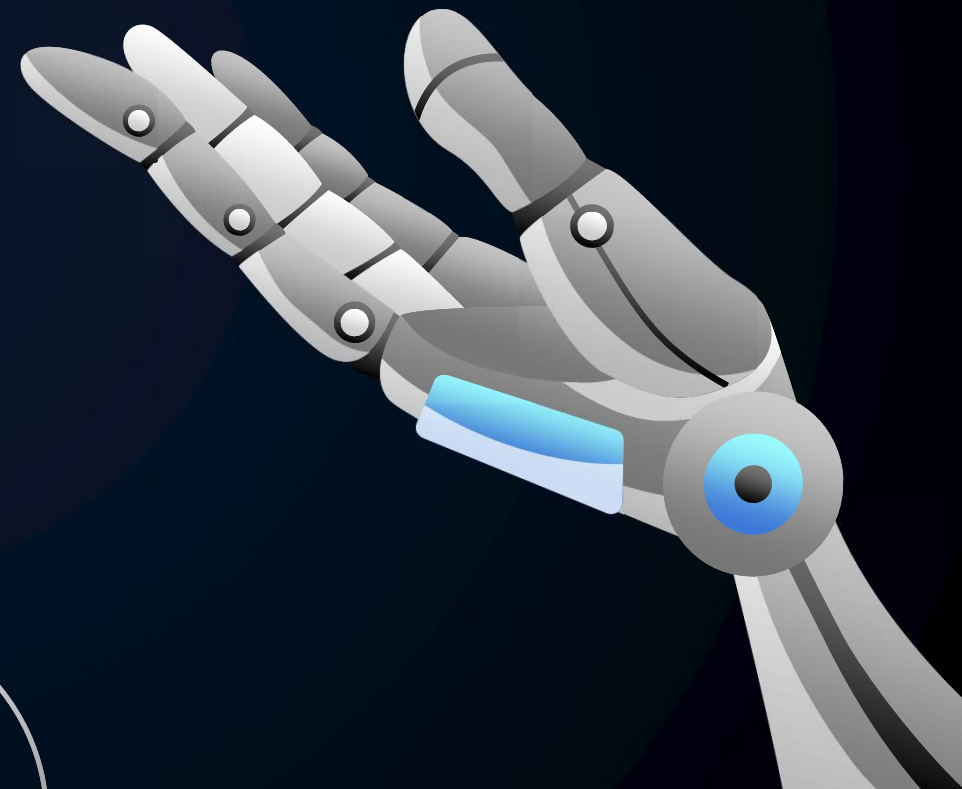
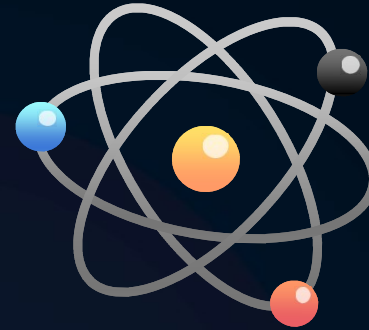


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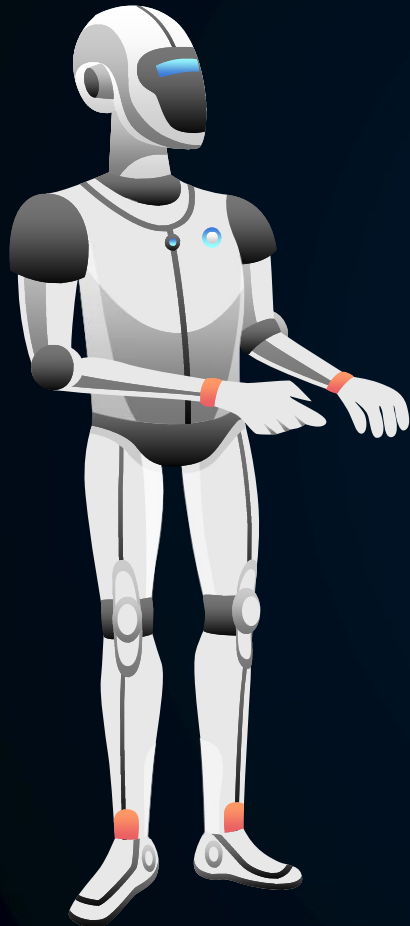
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PROBLEM STATEMENT

The aging population is increasing globally, leading to a growing need for technologies that address the unique challenges faced by the elderly. Common issues include loneliness, cognitive decline, medication adherence, and the need for personalized assistance. Traditional solutions often fall short in providing engaging companionship and addressing the emotional well-being of elderly individuals. To tackle these challenges, an AI-based interactive robot designed.



Abstract

The aging population is growing, and there is an increasing need for technologies that enhance the well-being and engagement of elderly individuals. This project proposes the development of an AI-based interactive robot designed specifically for the elderly. The robot utilizes ChatGPT, an advanced language model, along with Arduino microcontrollers and a laptop to provide a range of services, including question and answer interactions, storytelling, and scheduled medicine alerts. The humanoid robot design aims to create a familiar and approachable companion for elderly users, fostering a sense of companionship and assistance.





02

EXISTING METHODS



Companion robots

companion robots for the elderly provide basic interaction



Medication reminder

remind users to take medications at scheduled times



Voice assistants

assistants offer voice-controlled interactions



Educational apps

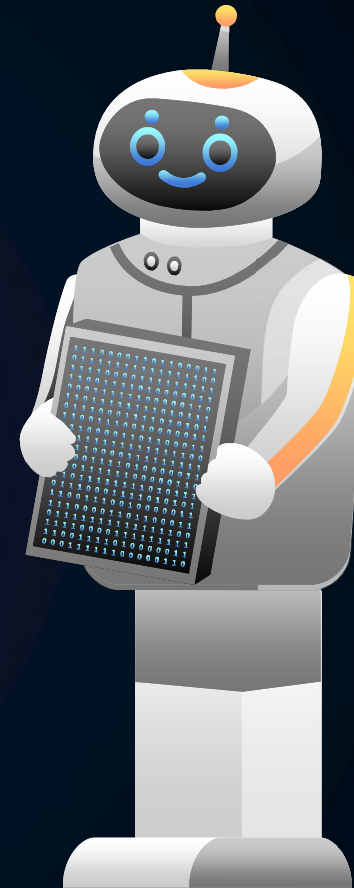
Mobile applications providing education contents

Drawbacks

Companion robots : Limited conversational abilities, lack of cognitive stimulation.

Voice assistants : Lack a physical presence, may not provide engaging conversations.

Medication reminders : reminders might not be engaging or adaptable to changing user needs





03

KEY FEATURES

Key features



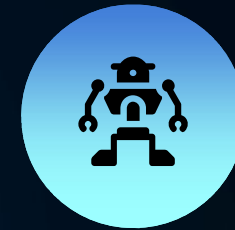
Natural Language Interaction

Enhances user engagement by providing a more human-like and conversational interaction.



Scheduled Medicine Alerts

Supports medication adherence by reminding users to take their medications on schedule



Humonoid Robot Design

Enhances user acceptance, reduces intimidation, and fosters a sense of companionship.

Key features



Gesture Recognition

Enhances interactivity,
allowing users to
communicate with the
robot through gestures for
certain commands



Voice Recognition and Response

Enables hands-free
interaction, making the
system accessible to users
with varying abilities.



04

TOOLS AND BUDGET

Hardware tools

- 1) Arduino Uno
- 2) LCD
- 3) Push buttons
- 4) Speakers
- 5) LED's
- 6) Light
- 7) 3D Robot model
- 8) Power Supply
- 9) PCB
- 10) Connecting wires



Software tools

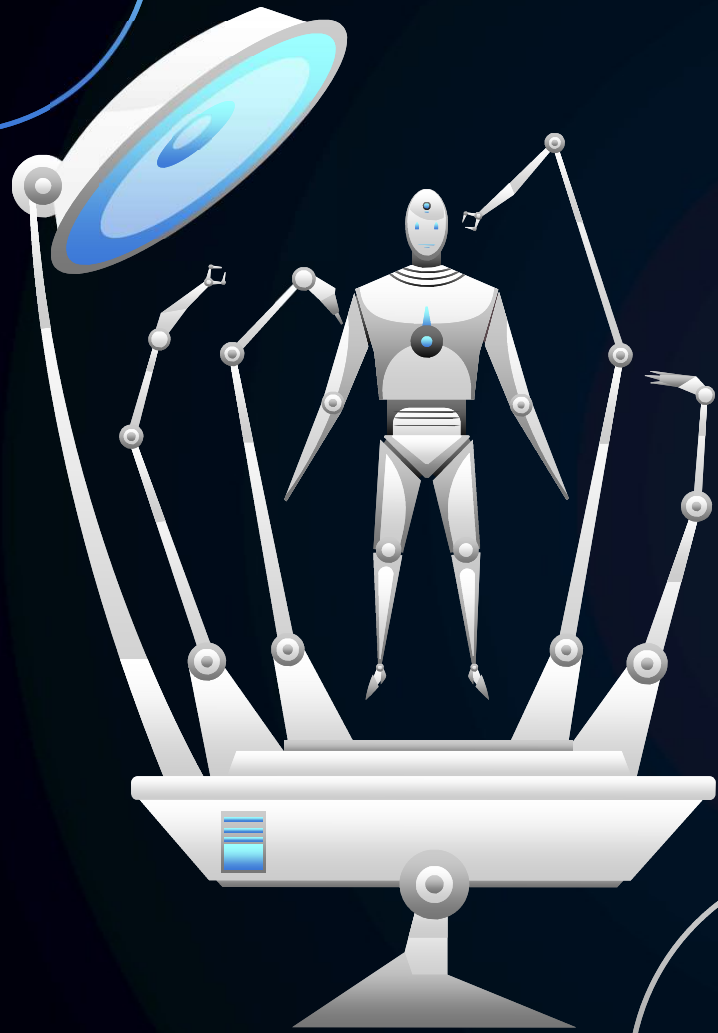
- 1.Arduino IDE
- 2.IDLE
- 3.Arduino-C and Python programming language



Budget estimation

1)	Arduino Uno	550
2)	LCD	200
3)	Push buttons	50
4)	Speakers	300
5)	LED's	5050
6)	Light	50
7)	3D Robot model	700
8)	Power Supply	100
9)	PCB	100
10)	Connecting wires	100
<i>TOTAL</i>		2200-2500





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**THANK
YOU**