Voice Activated Automatic Self-Folding Dining Table

ME423 | PROJECT GROUP 8

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Need

Traditional dining tables often **occupy 20-30% floor space** even when not in use, and manually adjusting them multiple times a day can be laborious. Our project aims to address these issues by creating a table that optimizes room space and simplifies daily operations through advanced automation and voice control.

SPACE-EFFICIENT DESIGN

Develop a dining table that reduces its footprint to one-third of the room's space when not in use

VERSATILITY

Ensure adaptability for various environments, including homes, offices, restaurants, and public spaces.

AUTOMATIC MECHANISM

Implement an automatic folding and unfolding mechanism.

VOICE CONTROL INTEGRATION

Incorporate speech recognition system for controlling table's operations via voice commands.

Objectives of Project

Challenges

DESIGN COMPLEXITY

Creating a folding mechanism that is both space-efficient, durable and versatile

STRUCTURAL INTEGRITY

Ensuring the table remains stable & secure both in its folded & unfolded states, especially considering the wear and tear of daily use.

VOICE COMMAND INTEGRATION

Ensuring accurate voice recognition and seamless operation even in noisy environments

UTENSIL DETECTION

Detecting the presence of utensils or other objects on the table surface before folding, to prevent damage or accidents.

Timeline

VOICE ACTIVATED AUTOMATIC SELF-FOLDING DINING TABLE

WEEK 1

Research & Conceptual Design

WEEK 2-3

CAD Modeling & Simulation of Folding Mechanism

WEEK 4-5

Prototype Construction

WEEK 6-7

Voice control system integration

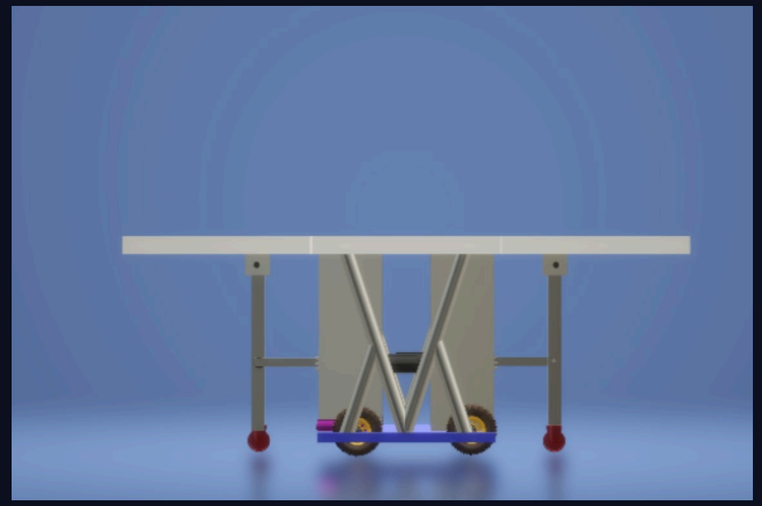
WEEK 8

Testing & Refinement

WEEK 9

Final Adjustments & Presentation

VOICE ACTIVATED AUTOMATIC SELF-FOLDING DINING TABLE



3D views

Thank you!