MoE's Innovation Cell (Government of India)

INSTITUTION'S INNOVATION COUNCIL (Ministry of HRD Initiative)

SHREE L. R. TIWARI DEGREE COLLEGE

(Arts | Commerce | Science)

UGC Recognition under sec 2(f) of the UGC Act 1956 | Approved by Government of Maharashtra | NAAC Accredited with Grade 'A' (1st Cycle) | Affiliated to University of Mumbai | College Code -1064 | ISO Certified 9001:2015 | Hindi Linguistic Minority institution

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REPORT ON "AAVISHKAR "RESEARCH CONVENTION 2024-25

Date: 11h December 2024
Time: 8.30 am onwards
Veneue:J .K. Shah College of Arts, Commerce, and Science, Ghansoli, Navi Mumbai

Introduction

The Aavishkar Research Convention is an annual initiative aimed at nurturing a culture of research and innovation among students in higher education. The 2024-25 convention provided a platform for aspiring entrepreneurs to present their start-up ideas and engage with experts in diverse fields. This event served as a bridge between academia and industry, enabling students to apply their knowledge to solve real-world problems. Students from **Shree L.R. Tiwari Degree College** actively participated in the event, forming seven groups to present their innovative start-up ideas under the guidance of experienced faculty mentors.

Overview

The Aavishkar Research Convention 2024-25 was held at J.K. Shah College, Ghansoli, Navi Mumbai, on 11th December 2024. A total of seven start-up projects from Shree L.R. Tiwari Degree College were showcased, highlighting interdisciplinary innovations across various sectors. Guided by their faculty mentors, the students demonstrated their entrepreneurial acumen and commitment to solving contemporary challenges. The event provided an opportunity for these young innovators to present their projects to a wider audience and compete for selection in the final round.

Participating Start-Ups and Guides

1. **Flooressence: Revolutionizing Sustainable Flooring** (Pure Sciences)
   Guided by **Dr. Roma Ahuja**, this project highlighted innovations in sustainable flooring solutions designed to reduce environmental impact.

2. **AvRak: Selfless Service** (Engineering and Technology)
   Mentored by **Dr. Jinal Mehta**, the team presented a technologically driven service platform aimed at enhancing community assistance and support.
3. **Green Sip** (Agriculture and Animal Husbandry)
   Under the guidance of **Dr. Saee Sawant**, this start-up proposed eco-friendly practices in agriculture, focusing on sustainable consumption.
4. **Eco-friendly Compact Soula** (Commerce, Management, and Law)
   Supervised by **Dr. Akanksha Asar**, the project showcased an innovative product for eco-conscious consumers in urban markets.
5. **Nivala: Where Every Bite is at Right Price** (Commerce, Management, and Law)
   Led by **Dr. Vaishali Kothiya**, this initiative focused on delivering affordable and nutritious food solutions tailored to diverse consumer needs.
6. **Armada** (Engineering and Technology)
   Guided by **Asst. Prof. Neha Kulkarni**, this start-up demonstrated cutting-edge engineering solutions aimed at improving technological efficiencies.
7. **Compact Three-Wheel Electric Scooter Designed for Senior Citizens** (Engineering and Technology)
   Mentored by **Dr. Sanjay Mishra**, the team presented a practical and user-friendly mobility solution to address the needs of senior citizens.

Objectives

1. To provide a platform for students to present innovative start-up ideas.
2. To promote interdisciplinary collaboration and research-driven entrepreneurship.
3. To identify and nurture projects with potential for real-world application.
4. To enhance mentorship and industry-academic partnerships.

Outcomes

1. All seven participating teams from Shree L.R. Tiwari Degree College displayed exceptional creativity and problem-solving abilities, addressing diverse societal needs.
2. Two teams, **AvRak: Selfless Service** and **Nivala: Where Every Bite is at Right Price**, were selected for the final round of the convention.
3. The event inspired students to think beyond conventional boundaries and apply their research to practical solutions, showcasing their potential for entrepreneurship.

Conclusion

The Aavishkar Research Convention 2024-25 was a resounding success, achieving its goal of inspiring innovation and entrepreneurial spirit among students. The students from Shree L.R. Tiwari Degree College stood out for their dedication, guided by the invaluable mentorship of their faculty. The event concluded with the selection of two standout projects—**AvRak** and **Nivala**—to represent the college in the final round. This convention reaffirmed the importance of fostering a culture of innovation, research, and entrepreneurship in academic institutions.

Dr. Jinal Mehta	**Dr. Vaishali Kothiya**	**Dr. Sanjay Mishra**
IIC Convenor	**Dean - Research, Innovation, Incubation & IPR Cell**	**I/C Principal**

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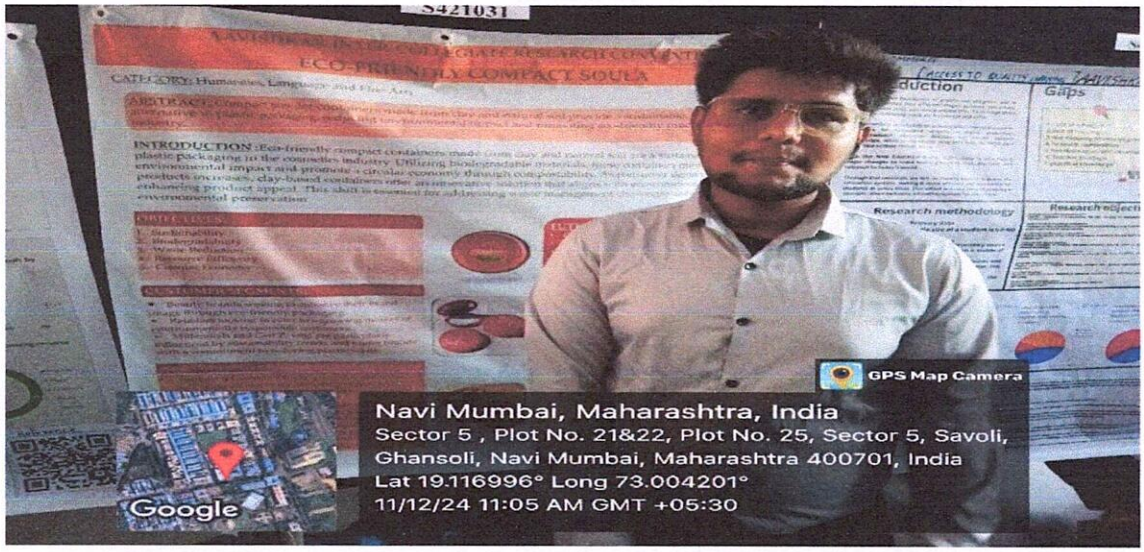
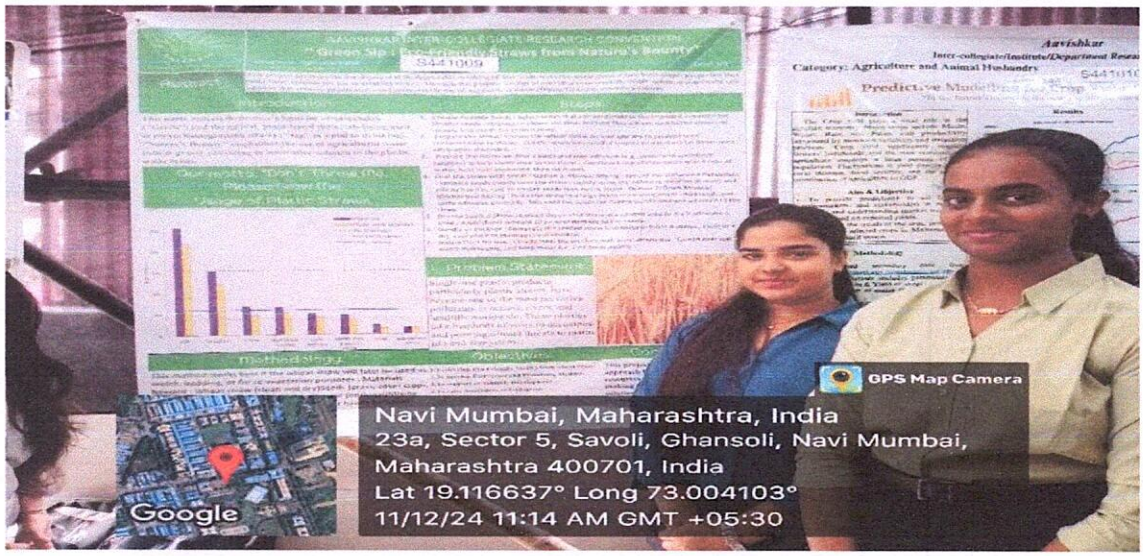


Shree L. R. Tiwari Degree College of Arts, Comm. & Sci. ★ Mira Road (East)



AAVISHKAR RESEARCH CONVENTION 2024-25
ECO-FRIENDLY COMPACT SOULA

CATEGORY: Humanities, Language and Fine Arts

LEVEL: UG

ABSTRACT: Compact powder containers made from clay and natural soil provide a sustainable, biodegradable alternative to plastic packaging, reducing environmental impact and promoting eco-friendly practices in the cosmetics industry.

INTRODUCTION :Eco-friendly compact containers made from clay and natural soil are a sustainable alternative to plastic packaging in the cosmetics industry. Utilizing biodegradable materials, these containers minimize environmental impact and promote a circular economy through compostability. As consumer demand for sustainable products increases, clay-based containers offer an innovative solution that aligns with eco-conscious practices while enhancing product appeal. This shift is essential for addressing waste management challenges and fostering environmental preservation

OBJECTIVES:

1. Sustainability
2. Biodegradability
3. Waste Reduction
4. Resource Efficiency
5. Circular Economy

FUTURE PROSPECTUS:

- Generating employment :
- Promoting are culture and arts
- Generating more cosmetic product to reduce plastic use

CUSTOMER SEGMENTS:

- Beauty brands seeking to enhance their brand image through eco-friendly packaging.
- Retailers looking to cater to a growing market of environmentally responsible customers.
- Millennials and Gen Z, who are particularly influenced by sustainability trends and prefer brands with a commitment to reducing plastic waste.

CONCLUSION :

- Consumer Demand:

There is a rising demand for eco-friendly packaging solutions among environmentally conscious consumers, particularly Millennials and Gen Z.

- Environmental Impact:

Eco-friendly packaging significantly reduces waste, conserves resources, and minimizes pollution, contributing to a healthier planet.

SOCIAL BENEFIT

- Enhanced Customer Experience: Eco-conscious packaging enhances the unboxing experience, reflecting a brand's commitment to sustainability and quality
- Support for Local Economies: Sourcing sustainable packaging materials locally boosts regional economies and supports small businesses.
- Empowerment and Responsibility: Choosing eco-friendly options allows consumers to contribute to environmental preservation, fostering a sense of responsibility towards a sustainable future.

REFERNCE :

1. https://www.google.com/
2. Unique art of Warli painting by Sudha Satyawadi in 2010
3. https://chatgpt.com/
4. Photo generate by www.canva.com

GreenSip

AAVISHKAR RESEARCH CONVENTION 2024-25

" Green Sip : Eco-Friendly Straws from Nature's Bounty"

Category: Bachelor Of Commerce. Level: UG

Abstract

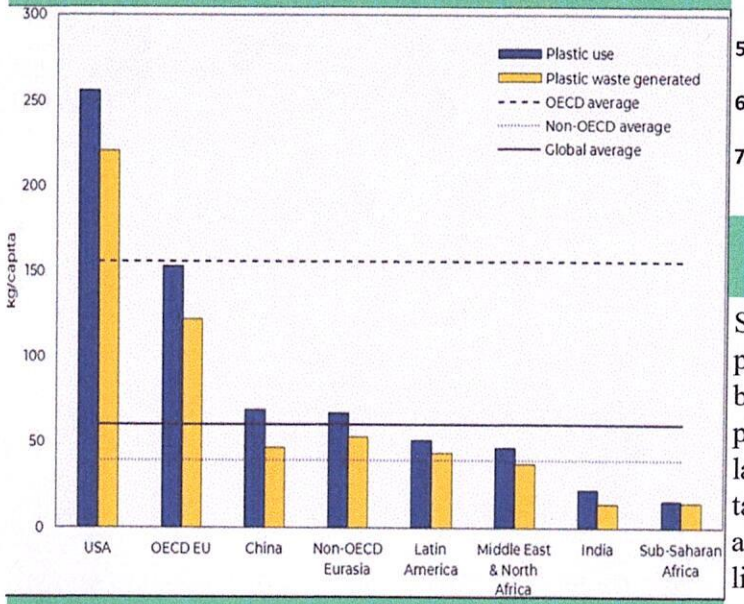
This project proposes the development of biodegradable drinking straws made from the inner stems of indigenous plant species, including wild vines, water reeds, and resilient grasses, which have unique properties that make them suitable for use as drinking straws.

Introduction

This name reflects the project's focus on sustainability ("Green") and the natural, plant-based materials being used to create biodegradable straws ("Sip" as a nod to drinking). "Nature's Bounty" emphasizes the use of traditional, indigenous plants that are abundant in nature, providing an innovative solution to the plastic waste crisis.

"Jaise har business ke liye customer zaruri hota hai waise har business ko grow karne collaboration zaruri hota hai"

Graph.



Steps.

1. **Choose Suitable Seeds : Select seeds that can germinate in the intended environment . Smaller seeds like grass or clover are ideal because they adhere well to the straw and require less depth for germination.**
2. **Prepare the Straw : Ensure the wheat straw is clean and dry to prevent seed contamination or decay . Cut the straw into smaller lengths (2-4 inches) for better seed integration if needed.**
3. **Prepare the Adhesive (Optional):Mix a biodegradable adhesive (e.g., water and cornstarch solution) to help seeds stick to the straw . For a simple DIY mix: Combine 1 cup of cornstarch with 4 cups of water, heat until thickened, then let it cool.**
4. **Coat the Straw with Seeds : Option 1: Manual Mixing : Spread the straw on a flat surface . Sprinkle seeds evenly over the straw . Lightly spray the adhesive solution (if used) and mix by hand or rake to ensure seeds stick to the straw . Option 2: Drum Mixer or Mechanized Mixing : Place the straw in a large drum or rotating mixer . Add seeds and spray adhesive gradually . Mix until the seeds are evenly distributed and attached to the straw.**
5. **Dry the Seeded Straw : Spread the seeded straw in a shaded area to dry if adhesive is used . Avoid direct sunlight to prevent damage to the seeds.**
6. **Bundle or Package : Compress the seeded straw into bales or loose bundles . Store in a dry, cool place to maintain seed viability.**
7. **Instructions for Use : Clearly label the product with instructions like "Spread over soil, water thoroughly, and keep moist for seed germination."**

Problems.

Single-use plastic products, particularly plastic straws, have become one of the most pervasive pollutants in oceans, rivers, and landfills worldwide. These plastics take hundreds of years to decompose and pose significant threats to marin life and ecosystems.

Methodology.

This method works best if the wheat straw will later be used as mulch, bedding, or for re-vegetation purposes . Materials Needed : Wheat straw (clean and dry)Seeds (grass, cover crops, wildflowers, etc.)A biodegradable adhesive (optional)Mixing tools (like a drum mixer, rake, or even your hands for small batches)Storage bags or bales

Objectives.

1.To Identify Traditional Plant Materials:
2.To Develop Extraction and Processing Methods:
3.To Test Durability and Usability:
4.To Assess Environmental Impact:
5.To Promote Local Economy and Sustainability:
6.To Raise Awareness and Adoption:

Conclusion.

This project offers a unique approach by harnessing local plant resources that are often overlooked, making it not only an environmental solution but also an opportunity for economic and cultural

AAVISHKAR RESEARCH CONVENTION 2023-24

NIVALA : WHERE EVERY BITE IS AT RIGHT PRICE

Category: Commerce, Management and Law

Level: UG

Abstract

Nivala is a food delivery platform designed to end overpriced meals caused by high commissions. By offering 0% commission for restaurants, we ensure fair pricing for customers while empowering local businesses to thrive.

Problem Statement

Consumers Pay Around Double the Offline Price: Customers often pay nearly twice the price of offline meals due to high online food delivery costs.

High Commission Fees: Delivery platforms charge restaurants up to 30% in commissions, forcing them to increase prices and compromising quality and quantity

Lack of Restaurant Support: Existing food delivery platforms provide little support for restaurant growth or profitability.

The Gap: A delivery platform that benefits both customers and restaurants equally.

Price Gap

100	⟶	Offline
130	⟶	Online
+ 40	⟶	Delivery Charges
+ 8	⟶	Platform fees
+ 32	⟶	GST & Rest. Charges
210		Total Bill

Introduction

Our research has uncovered significant issue in the food delivery industry: Customers are often paying nearly double the offline price for the same meal due to inflated prices, delivery charges, and platform fees. We found that high commissions up to 30%—force restaurants to increase their prices and, in some cases, compromise on the quality and quantity of their offerings. Nivala addresses this problem by eliminating these commissions, enabling restaurants to price their meals fairly, just as they would offline. By doing so, we create a transparent and equitable food delivery experience that benefits both consumers and local businesses.

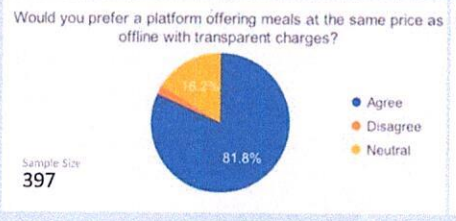
Objective

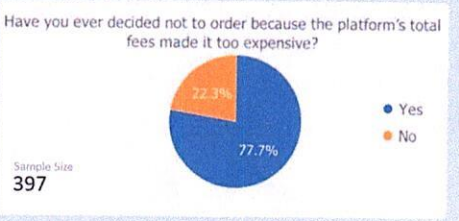
- Provide customers with affordable meals priced similarly to offline prices.
- Eliminate commission fees for restaurants to improve their profitability.
- Offer tiffin, catering services, and health-conscious meal options to meet diverse customer needs.
- Support restaurant growth through business tools and services.

Hypothesis

- Offering meals at the same prices as offline with transparent fees, customers will prefer Nivala over competitor platforms.
- Customers often hesitate to finalize orders because of total cost being too expensive.

Testing of Hypothesis





Customer Segment

- Budget-conscious individuals looking for affordable meal solutions.
- Busy professionals in need of quick, convenient meals.
- Health-conscious Individuals looking for diverse food options
- Tiffin and catering users

Revenue Model

- Delivery Fees
- Platform Fees
- Priority Listings
- Local Ads
- Business Growth and Setup Services

Social Benefits

- Reducing food costs for users.
- Empowering restaurants with better profit margins.
- Generating jobs, empowering women and supporting senior citizens.
- Promoting healthier eating through affordable tiffin services.

Bibliography : https://www.kodzinafoodtech.com/blog/how-much-swiggy-charges-from-restaurants, https://www.zomato.com/policies/deals/

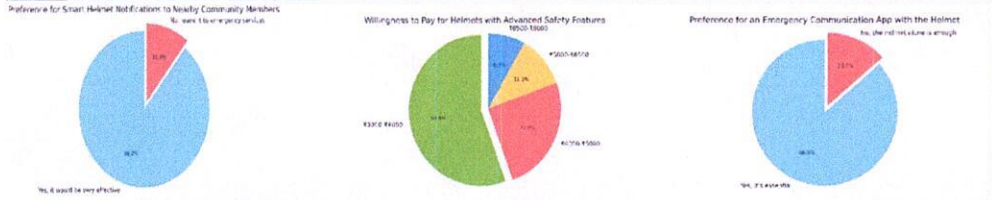
Aavishkaar Research convention 2024-25
AvRak:Selfless Service
Category:-Teachnology & Engineering **Level:UG**

Abstract
Avrak is an innovative safety technology company specializing in smart devices like helmets and wristbands. These devices detect accidents, notify emergency responders, and provide health monitoring, ensuring timely assistance and enhanced safety.

Introduction
Avrak's smart helmet combines accident detection with emergency notifications, connecting contacts, hospitals, responders, and local people to ensure immediate assistance and enhanced post-accident safety measures.

Gap Analysis
1. 📍 Enhance GPS tracking for accurate accident location, reducing response time.
2. ⚠ Implement injury severity detection to prioritize urgent medical care.
3. 🚦 Integrate with traffic systems to ensure faster emergency vehicle routing.

Objectives
1' 📍 Notify the user's guardians with precise accident location and situation details.
.2. 📲 Broadcast accident alerts to all nearby AVRAK users for immediate assistance.
3.🛠 Provide step-by-step guidance for first responders and witnesses on the app.

Testing of Hypothesis


Hypothesis
The AVRAK smart helmet will enhance road safety by providing real-time accident detection and instant emergency notifications to authorities, nearby users, and guardians. This will reduce response times, improve survival rates, and foster a community-driven approach to accident assistance, making advanced safety technology accessible and impactful for two-wheeler riders.

How AvRak Works?
AVRAK's smart helmet works by detecting accidents using built-in sensors. When an accident occurs, the helmet sends real-time notifications to the AVRAK app, which alerts nearby emergency services, such as hospitals and police stations and local people who use our app with the accident's location via GPS. The helmet is designed to automatically assess injury severity using AI algorithms, ensuring a quicker, more accurate response. If the rider does not respond to the alerts, the system escalates the notifications to emergency contacts. This system improves safety by ensuring prompt medical intervention and faster response times during accidents.Avrak builts a community among the local people to help the person in need and when the person will help the accident proned person the person who helped them will get in-app rewards.

Customer Segment
wo-Wheeler Riders: Ensures safety for ikers and commuters.

elivery Personnel: Protects couriers with uick emergency responses.

arents: Provides peace of mind for loved nes' safety.

Social Benefits
1.promotes a community-driven emergency support network.
2.Enhances road safety through real-time incident alerts to nearby users.
3.Minimizes fatalities by bridging communication in emergencies

Conclusion
Quick Response: Notifies services and users instantly.

Community Support: Fosters mutual assistance.

Affordable: Accessible safety technology.

AAVISHKAR RESEARCH CONVENTION 2024-25

ARMADA : YOUR HELPING HAND

CATEGORY: ENGINEERING AND TECHNOLOGY | LEVEL: UG

ABSTRACT: ARMADA is a robotic arm with app control, gesture recognition, and automated looping for tasks. A prototype with SG90 motors demonstrates efficiency, scalable to industrial applications using stepper motors.

INTRODUCTION

ARMADA is a groundbreaking project focused on creating a robotic arm prototype capable of executing tasks through three innovative control methods:

- **App Control** – Seamless operation through a interface.
- **Gesture Recognition** – Using Python program to translate Camera movements into commands.
- **Automated Looping** – Designed for repetitive tasks in production lines.

The prototype, built with SG90 motors and lightweight materials, serves as a proof-of-concept for a scalable robotic system, ultimately advancing to a full-scale model powered by stepper motors for industrial applications.

GAP ANALYSIS

- Lack of affordable robotic solutions for small-scale industries.
- Limited adaptability in existing automation systems.
- High costs and complex operations .
- Absence of user-friendly, multi-functional control mechanisms..

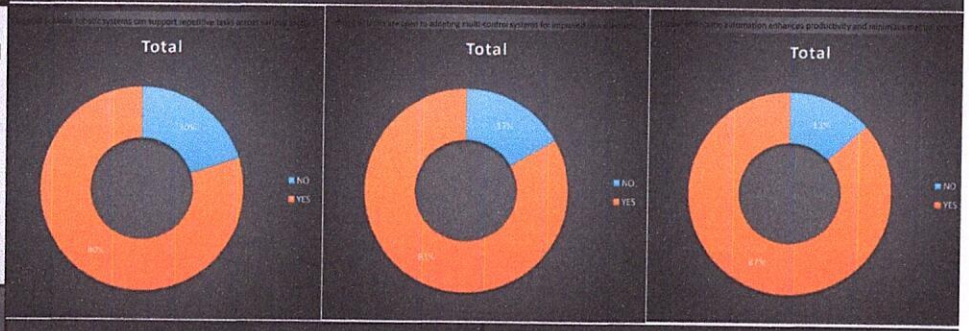
OBJECTIVES

- Introduce a versatile robotic arm for diverse applications.
- Create an affordable prototype for MSMEs and research facilities.
- Demonstrate practical automation through innovative control methods.
- Build a scalable model for industrial production lines.

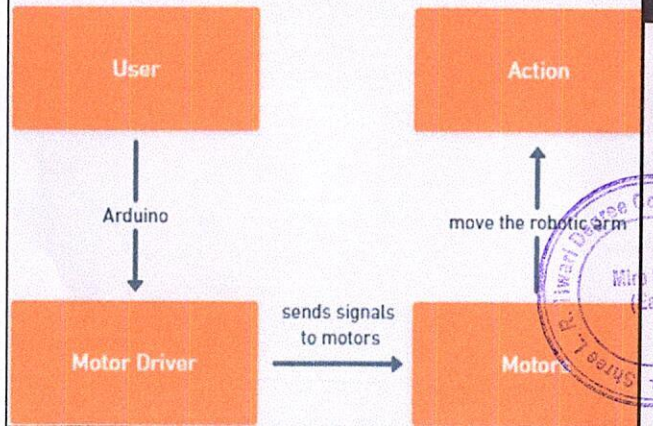
HYPOTHESIS

- Robotic automation enhances productivity and minimizes manual errors.
- Users are open to adopting multi-control systems for improved task execution.
- Scalable robotic systems can support repetitive tasks across various sectors.

TESTING OF HYPOTHESIS



HOW ARMADA WORKS?



SOCIAL BENEFITS

- **Enhanced Productivity**: Reduces workload and improves accuracy.
- **Environmental Sustainability**: Optimized energy usage in industrial tasks.
- **Cost Efficiency**: An affordable alternative to high-cost automation systems.

CONCLUSION

ARMADA redefines the boundaries of automation by integrating user-friendly controls and scalable solutions. It represents a significant leap forward in robotic efficiency, capable of transforming industries and empowering individuals to embrace automation at every level.

Shree Rahul Education Society's (Regd.)

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Name of the Event: Aavishkar Convention 2024-25

Name of the Department/Committee/Cell/Club: Research Innovation Incubation & IPR cell

Name of the Speaker: Dr. Sunil Patil / Minakshi Awar. Date: 11/12/2025

Sr. No.	Name of the Student	Class	Signature
1.	Afroz Shaikh	TYBMS (B)	
2.	Sakshi Vishwakarma.	FY BCom (B)	
3.	~~Waqar~~ Shamsi	~~FY BCOM (B)~~	
4.	Kamlesh Rana	F.Y. Bcom (B)	
5.	Waqar Shamsi	FY. BCOM (B)	
6.	~~K. Tanveer~~	~~F.Y Bcom~~	
7.	James Pandey	F.Y Bcom	
8.	Prahat	SYDS.	
9.	Ashis	SYDS	
10.	Uttam	SYDS	
11.	Lucky Singh	FYBCom	
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13.	Anurag	SYBSC IT	
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16.	Bcheti Preet	FYBcom	
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