Hello !!!

I'm Muhammad Sohaib

ENGINEERING PORTFOLIO

I am a Mechanical Engineering student at **Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI),** with a passion for robotics, automation, and mechanical system design. My expertise spans across research, team leadership, and hands-on experience in developing innovative engineering solutions.

INTRODUCTION

A curious problem-solver and a relentless learner, always seeking ways to push boundaries in engineering and beyond. With a structured yet adaptable mindset, I thrive in challenging environments that demand innovation and precision.

I lives in analyzing complex problems, breaking them down into practical solutions, and ensuring a methodical approach to execution. Resilience and adaptability define my journey, as I continuously evolve through every challenge I face.

Skill & Interest

- AUTOMATION
- ROBOTICS
- DESIGN (CAD/CAM)
- ANALYSIS

2019 - 2026

EDUCATION

My education journey has been a mix of challenges and growth, shaped by the unique experience of being a COVID.

This experience shaped my mindset and ability to innovate beyond traditional learning.

Superior College, Sargodha

FSc - Pre Engineering | 2019-22

GIK Institute

Bs Mechanical Engineering | 6th Semester | 2022-26

EXPERIENCE

2022 - 2025

Robotics Club

Head
Sept 2024 - Present

Leads a team developing an autonomous fruit-picking and sorting robot for NERC 2025. He oversees design, development, and AI-driven automation, ensuring seamless navigation and precision control.

Formula Team Infinity

Braking And Suspension Head
Nov 2022 - Present

I led the design and optimization of the braking and suspension system by enhancing handling, stability, and braking efficiency through precise component selection and geometry adjustments.

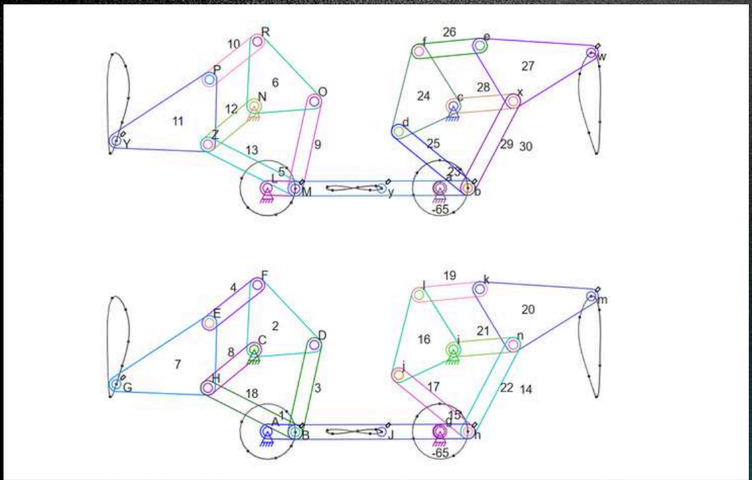
IMS

Captain
June - Sept | 2024

Dynamic platform for global engagement, growth, and interaction.
Led and managed 140 people around the globe , ensuring efficient task execution, continuous learning, and structured growth.

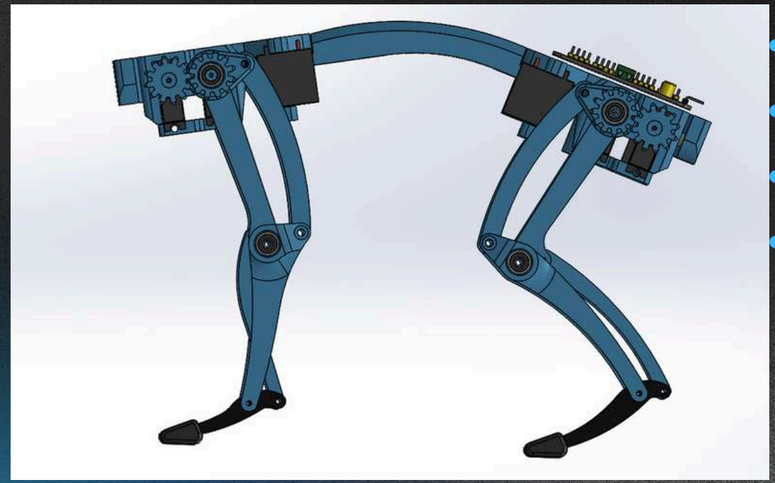
ACADEMIC PROJECT

2024 - 2025



Internal Pipe Crawling Mechanism | 2024

Based on using the Theo Jansen mechanism and a suspension link system for stable navigation in varying pipe diameters.

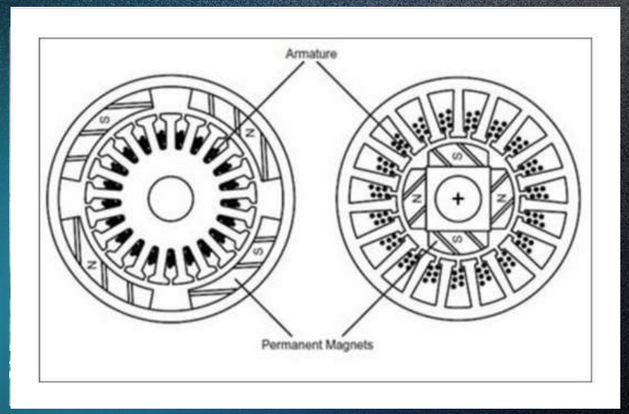


Quadruped based on Pneumatic Muscles and Adaptive Continuum Spine | 2025

Utilizing Fluid-based artificial McKibben muscles and an adaptive continuum spine to achieve compliant locomotion and controlled deformation.

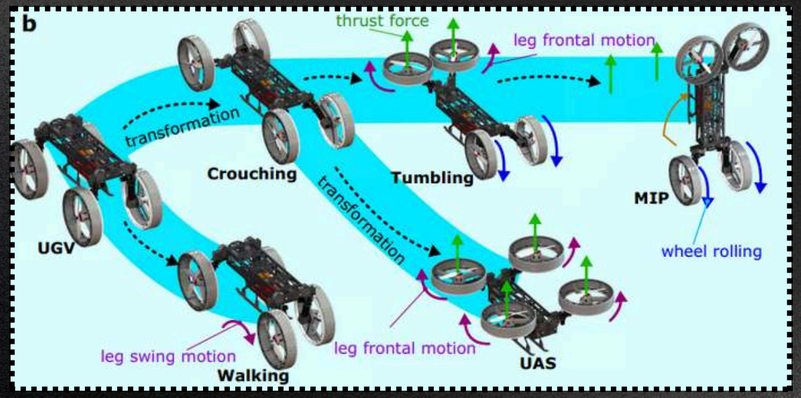
ACADEMIC PROJECT

2024 - 2025



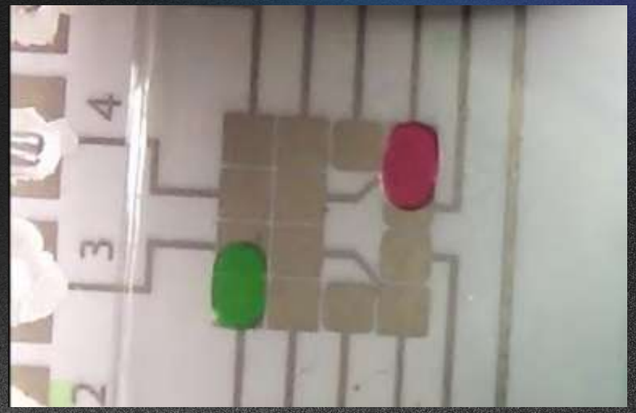
Analysis of 3 kW BLDC Motor | 2024 |

A software-based analysis using computational simulations and electromagnetic modeling, key parameters.



FYP | Multi Model Mobility Morphbot | 2025-2026

Morphing robot with quadrupedal walking, wheeled mobility, and modular transformation, enabling efficient movement with AI control and sensor feedback.

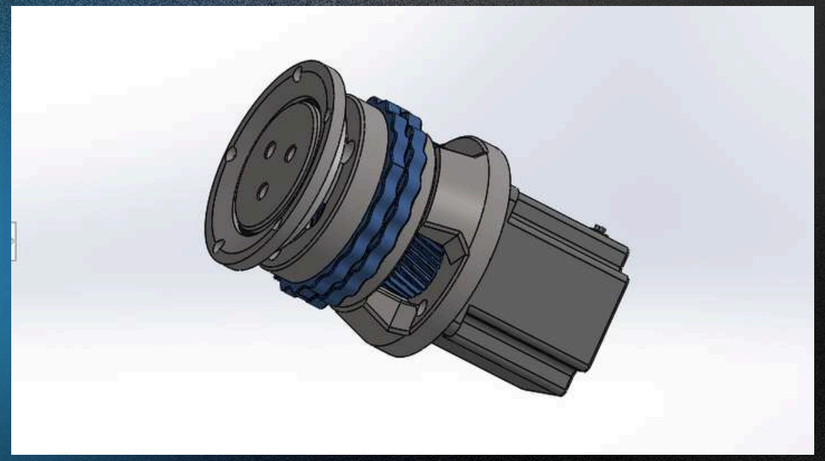


AC Voltage Frequency for EWOD | 2025 |

This research optimizes AC voltage frequency for precise fluid control in Digital Microfluidic Lab-on-a-Chip systems, enhancing droplet manipulation for microfluidic applications.

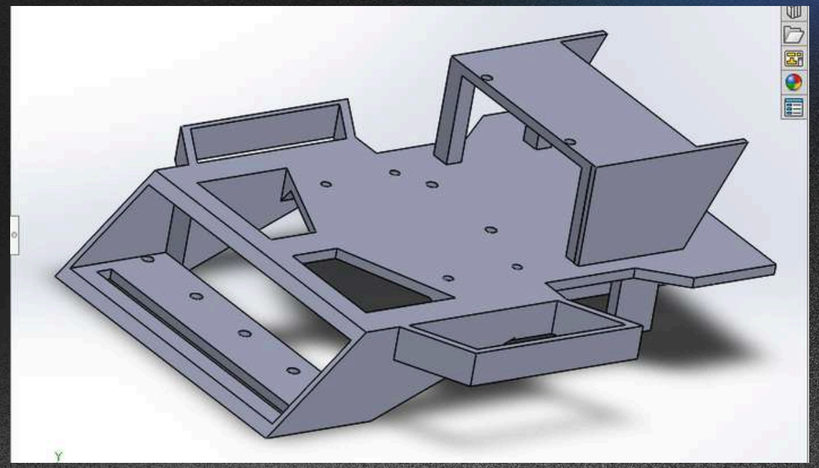
ACADEMIC PROJECT

2024 - 2025



Planetary/Cycloidal Drive

Focuses on designing and developing a high-torque, precision stepper motor using cycloidal and planetary gear mechanisms. The goal is to improve torque output, positional accuracy, and efficiency,



Autonomous Picking and Sorting Robot

The robot’s primary task is to locate, identify, pick, and place fruits at designated stations within a controlled arena. The design emphasizes precision, efficiency, and adaptability, ensuring successful task execution

CERTIFICATES

2022 - 2025

Coursera - Google
Project Management

Developed expertise in workflow optimization, risk assessment, and Agile methodologies, enhancing my ability to manage engineering projects efficiently from design to execution.

Unilever
Xsell Program
(Sales & Business Strategy)

Gained hands-on experience in data-driven sales strategies, market analysis, and consumer behavior, refining my approach to business-oriented problem-solving and decision-making.

SourceCode Academia
Emotional Intelligence

Strengthened skills in situational awareness, critical thinking, and leadership under pressure, improving my ability to navigate complex team dynamics in high-stakes engineering projects.

GET IN TOUCH

Let's Work Together

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MUHAMMAD SOHAIB

PORTOFOLIO 2025