

SHQ 3D

3D DESIGN & 3D PRINTING SOLUTIONS

MECHATRONICS & 3D PRINTING PORTFOLIO

by: @ariqshaq

SERVICE OFFER

> 3D DESIGN

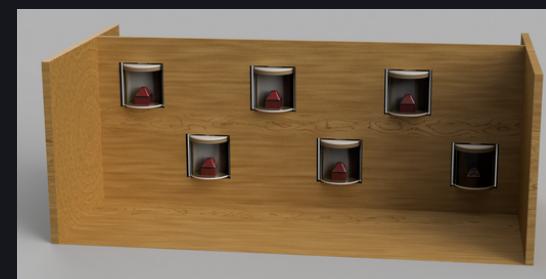
- We provide 3D Design by Request, specializing in Technical Design and Product Design for your projects.
- Experienced in Mechatronics Design, where we provide a requested Detailed Blueprint or Technical Drawing, including component placement and selection.
- All designs are Supported for Autodesk Softwares.

TRACK RECORD

- Over 20+ Clients on minor and major projects, including lab projects, campus projects, work experiences, and competition clients.
- Experienced with Over 4+ Years, handling tight deadlines and complex specification requests.
- Multiple Nationwide Recognitions from national competitions to high-stakes projects.

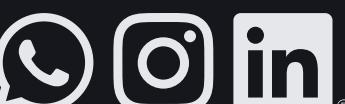
> 3D PRINTING

- We provide FDM 3D Printing supported for PLA, PETG, and TPU Materials.
- Your submitted designs can be Consulted First or Adjusted by Us for Free, so your designs fit well with the printing tolerance.
- Guaranteed to Print Immediately after the designs are submitted.
- We open to Requests for Printing Settings.



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Contacts:



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ABU ROBOCON 2024 ROBOT

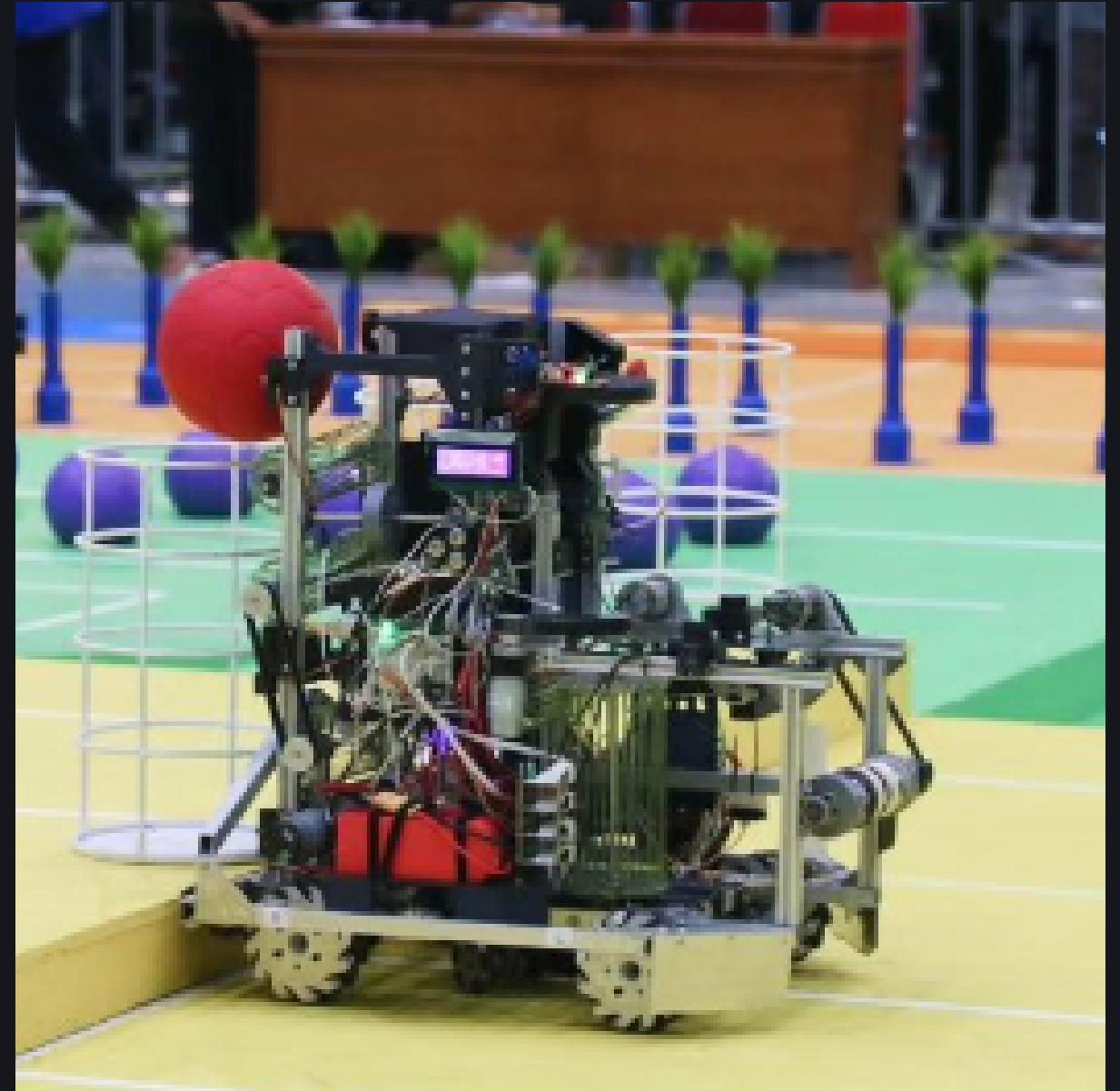
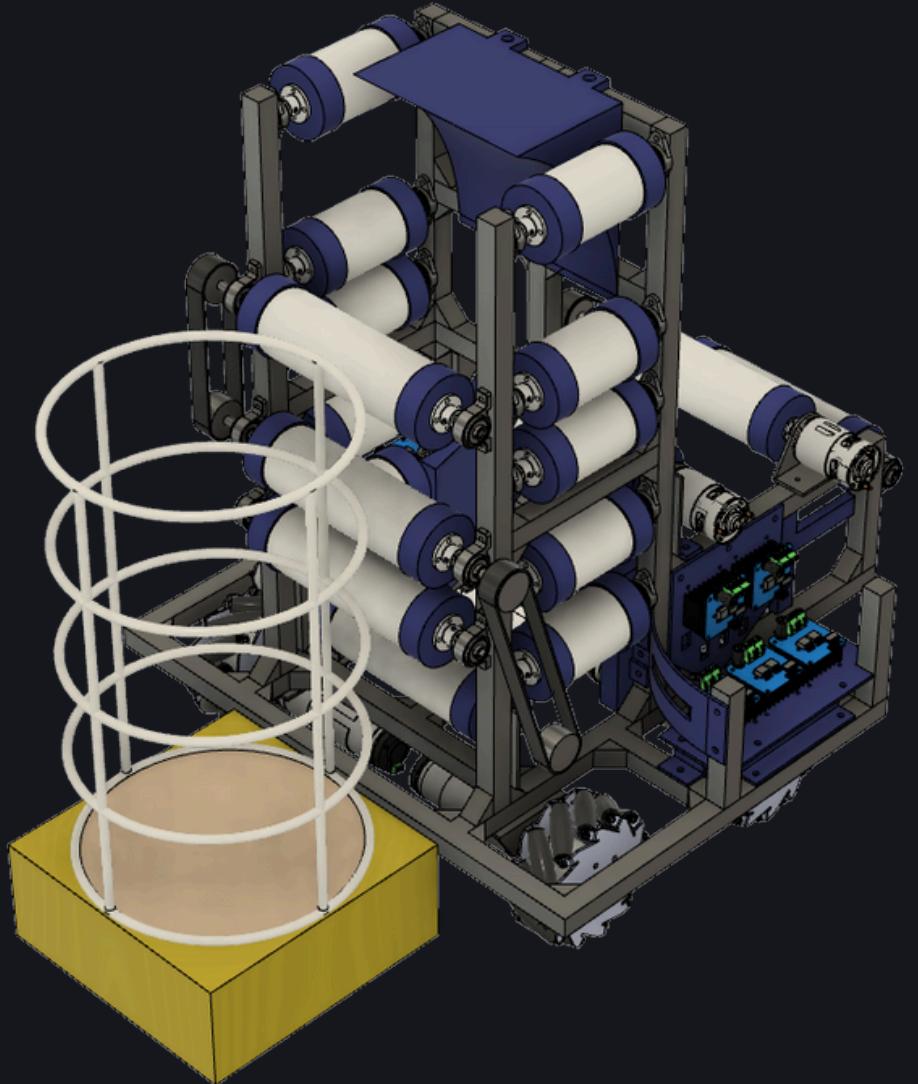
DESCRIPTION:

An Automatic Ball Sorting Robot

Robot, capable of picking and storing selected colored balls into silos.

TOOLS & SKILLS:

- 3D CAD
- 3D Printing
- Mechanism Design
- Grinding
- Drilling
- Hand Tools



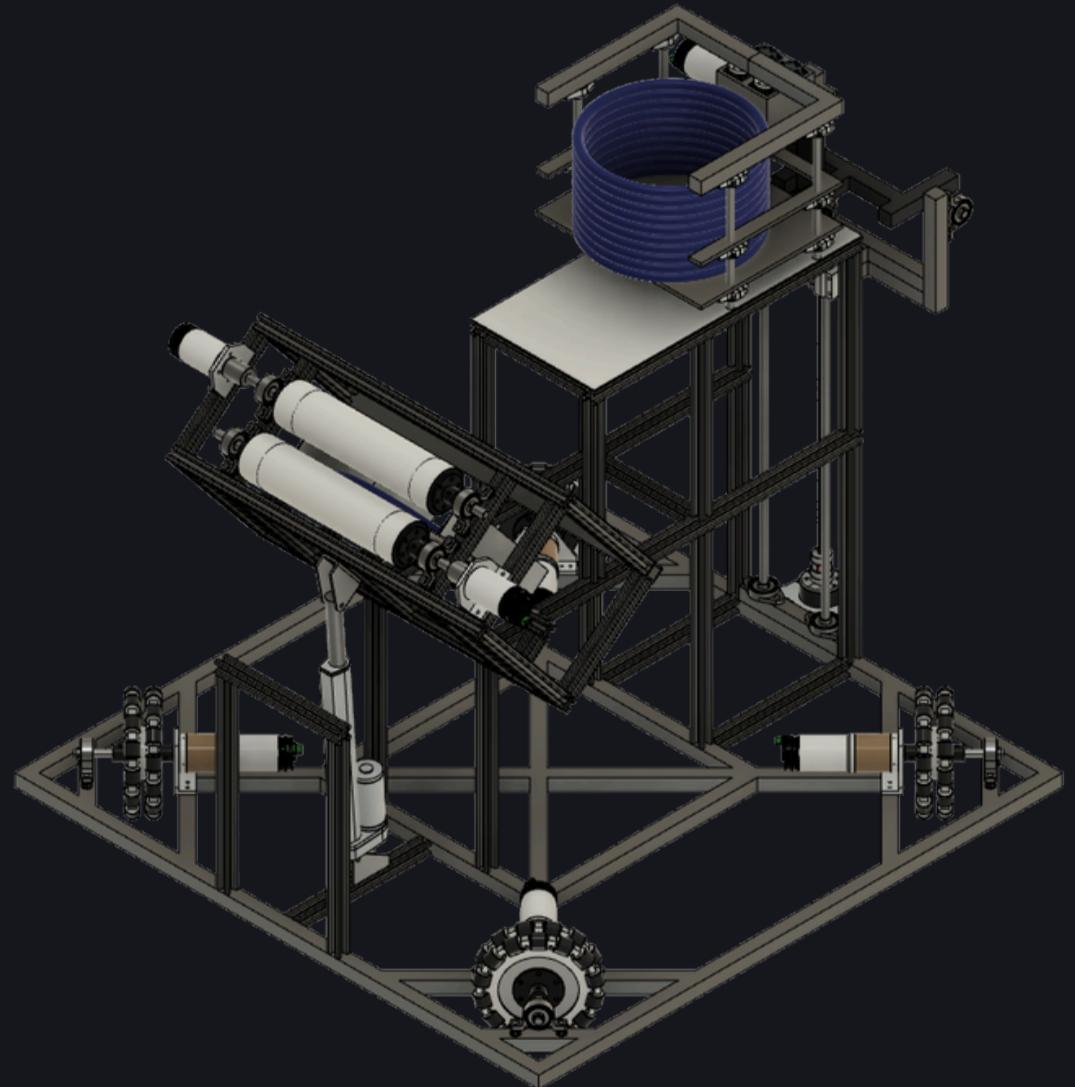
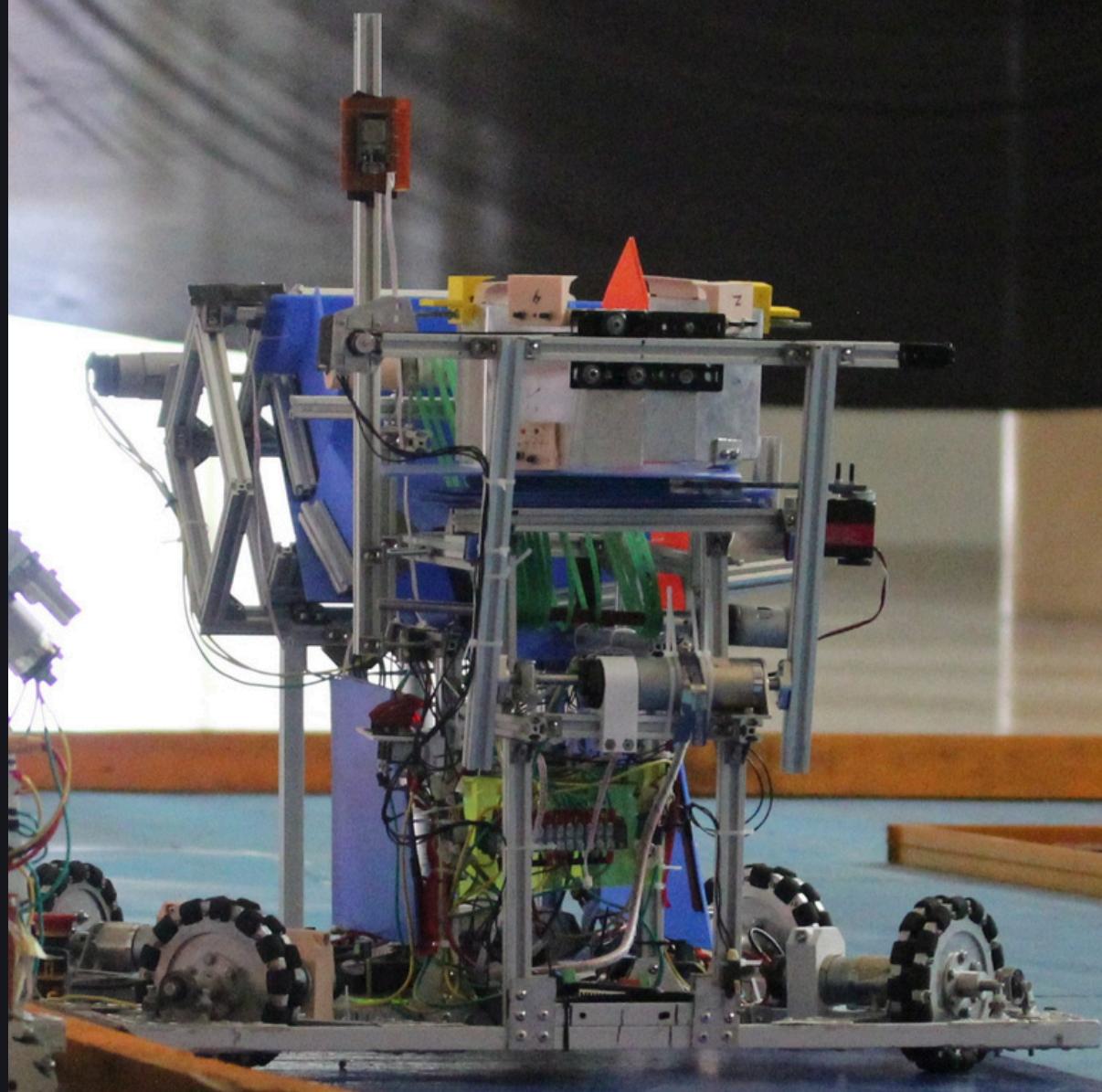
ROLE:

Mechanics (3D Design, Component Selection, Assembly)

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SELECTED PROJECTS

ABU ROBOCON 2023 ROBOT



ROLE:

Mechanics (3D Design, Component Selection, Assembly)

DESCRIPTION:

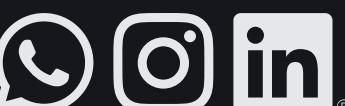
A Man-Operated Ring Throwing Robot, capable of picking and throwing rings into poles.

TOOLS & SKILLS:

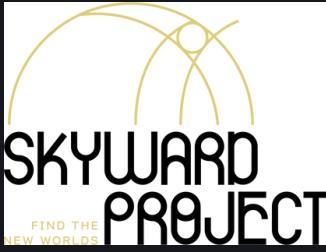
- 3D CAD
- 3D Printing
- Mechanism Design
- Grinding
- Drilling
- Hand Tools

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Contacts:



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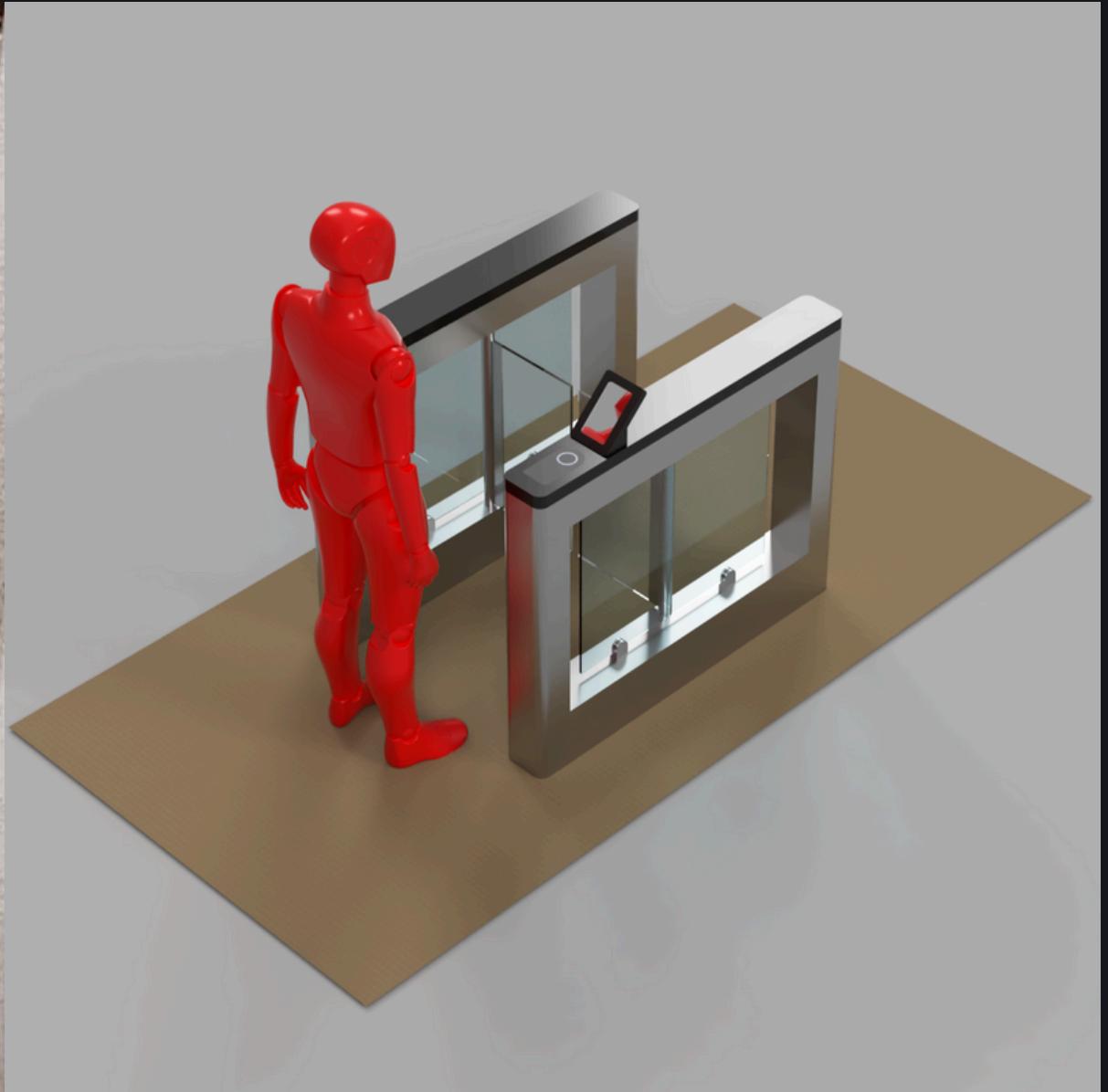
DESCRIPTION:

An Entrance Gate Concept and Mounted Display, customized for ZKTeco Gate with a 3D printed display casing.

TOOLS & SKILLS:

- 3D CAD
- 3D Printing
- Product Design
- Product Finishing
- Grinding
- Drilling
- Hand Tools

SKYWARD PROJECT - ENTRANCE GATE



ROLE:

3D Design Specialist - Mechatronics Engineer

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SELECTED PROJECTS

SKYWARD PROJECT - KID'S GAME

**ROLE:**

3D Design Specialist - Mechatronics Engineer

DESCRIPTION:

The Busy Table at Zeppelin, designed for kids' games from acrylics and 3D printed materials.

TOOLS & SKILLS:

- 3D CAD
- 3D Printing
- Mechanism Design
- Product Design
- Product Finishing
- Hand Tools

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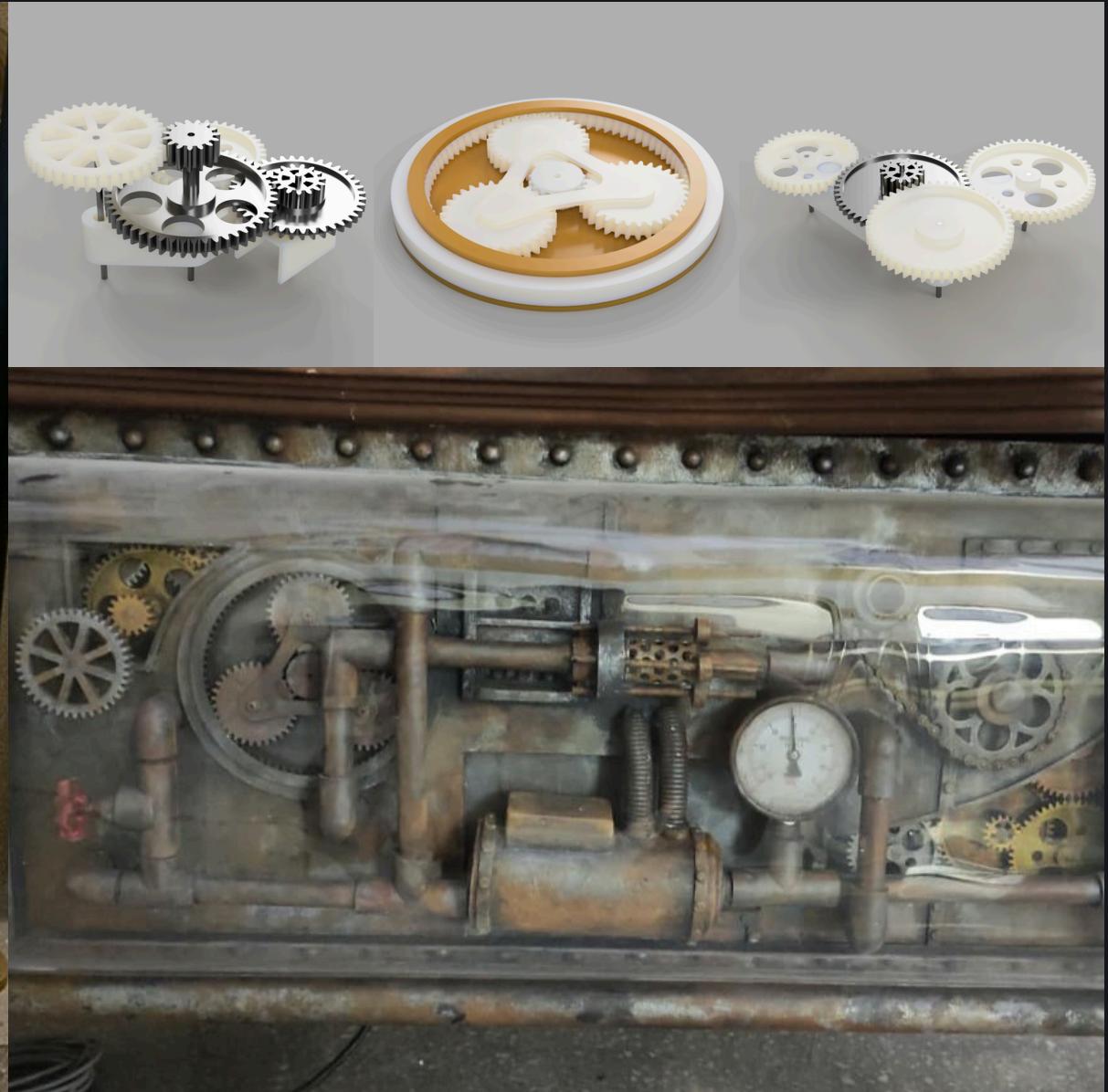
SKYWARD PROJECT - CARD DISPENSER

DESCRIPTION:

A Card Dispensing Machine,
including gear sets as the
machine's interactive display.

TOOLS & SKILLS:

- 3D CAD
- 3D Printing
- Mechanism Design
- Product Design
- Product Finishing



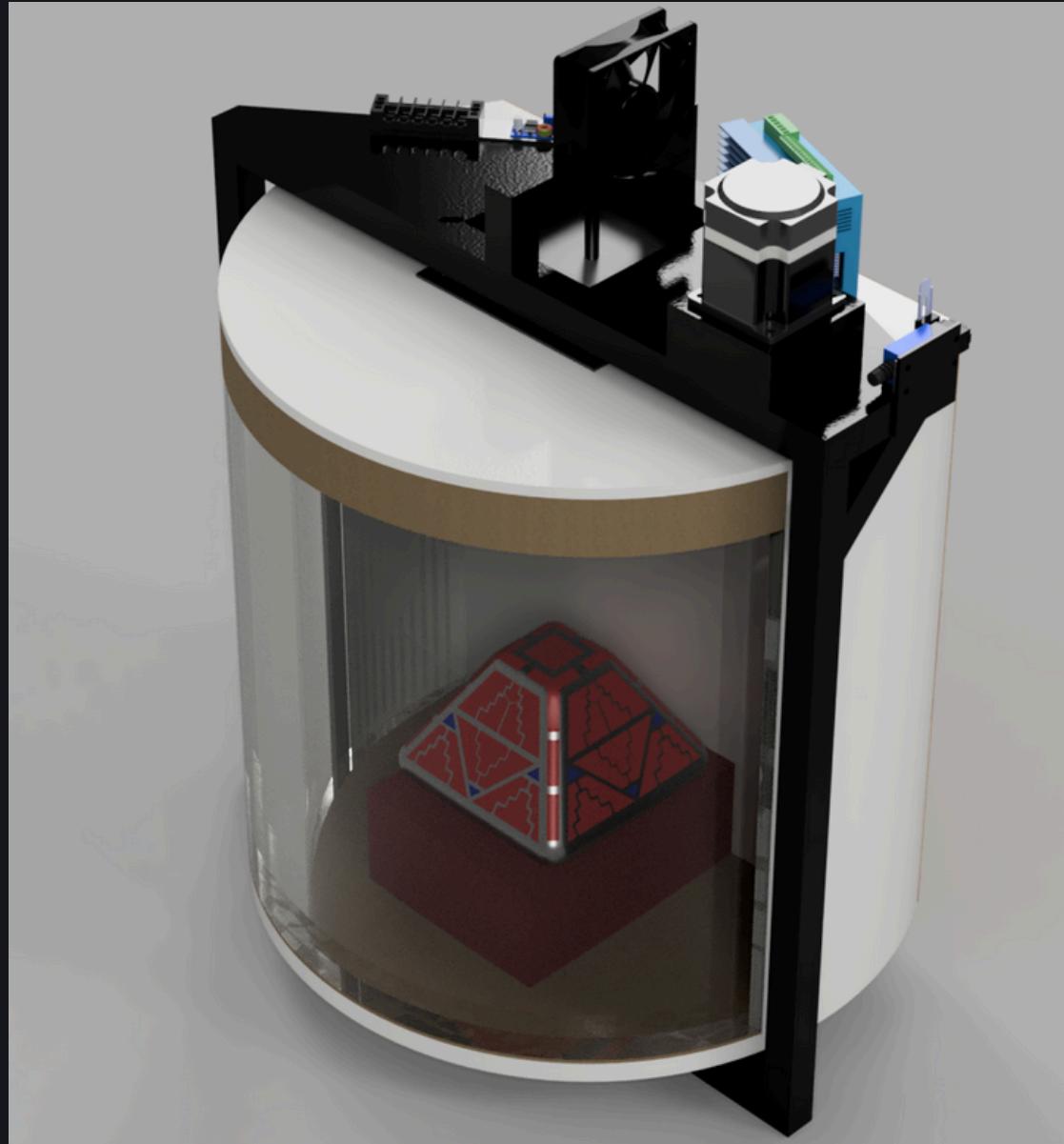
ROLE:

3D Design Specialist - Mechatronics Engineer

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SELECTED PROJECTS

MECHATRONICS DISPLAY AT MUNAS

**ROLE:**

Mechatronics Engineer (3D Design & Programming)

DESCRIPTION:

An Automatic Artifact Display, using six synchronized stepper motors for a Museum Nasional event.

TOOLS & SKILLS:

- 3D CAD
- Mechanism Design
- Microcontroller
- C++ Programming

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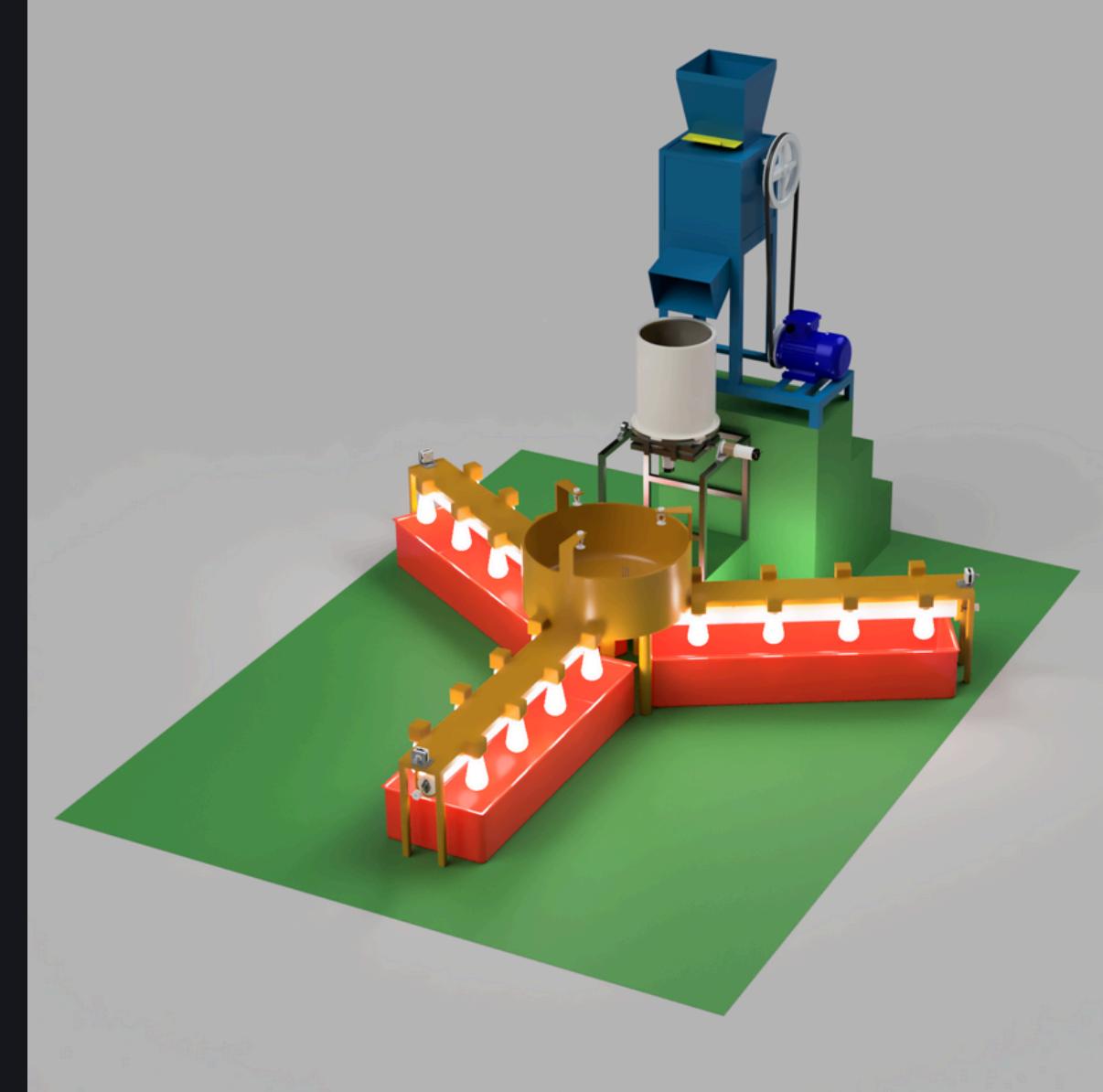
MAGGOT FEEDER FOR INNOVILLAGE CLIENT

DESCRIPTION:

Maggofeed: A Maggot Feeder
for an organic waste processing system.

TOOLS & SKILLS:

- 3D CAD
- Mechanism Design
- Product Design
- Detailed Blueprints



INNOVILLAGE

ROLE:

Mechatronics Engineer (3D Design Concept)

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SELECTED PROJECTS

AUTOMATIC CAT FEEDER PROTOTYPE



DESCRIPTION:

An Automatic Cat Feeder, using sensors, a motor, and an ESP32 connected to Kodular and Antares for an IoT project.

TOOLS & SKILLS:

- 3D CAD
- 3D Printing
- Mechanism Design
- Product Design

ROLE:

3D Printing Engineer (3D Design, 3D Printing, Assembly)

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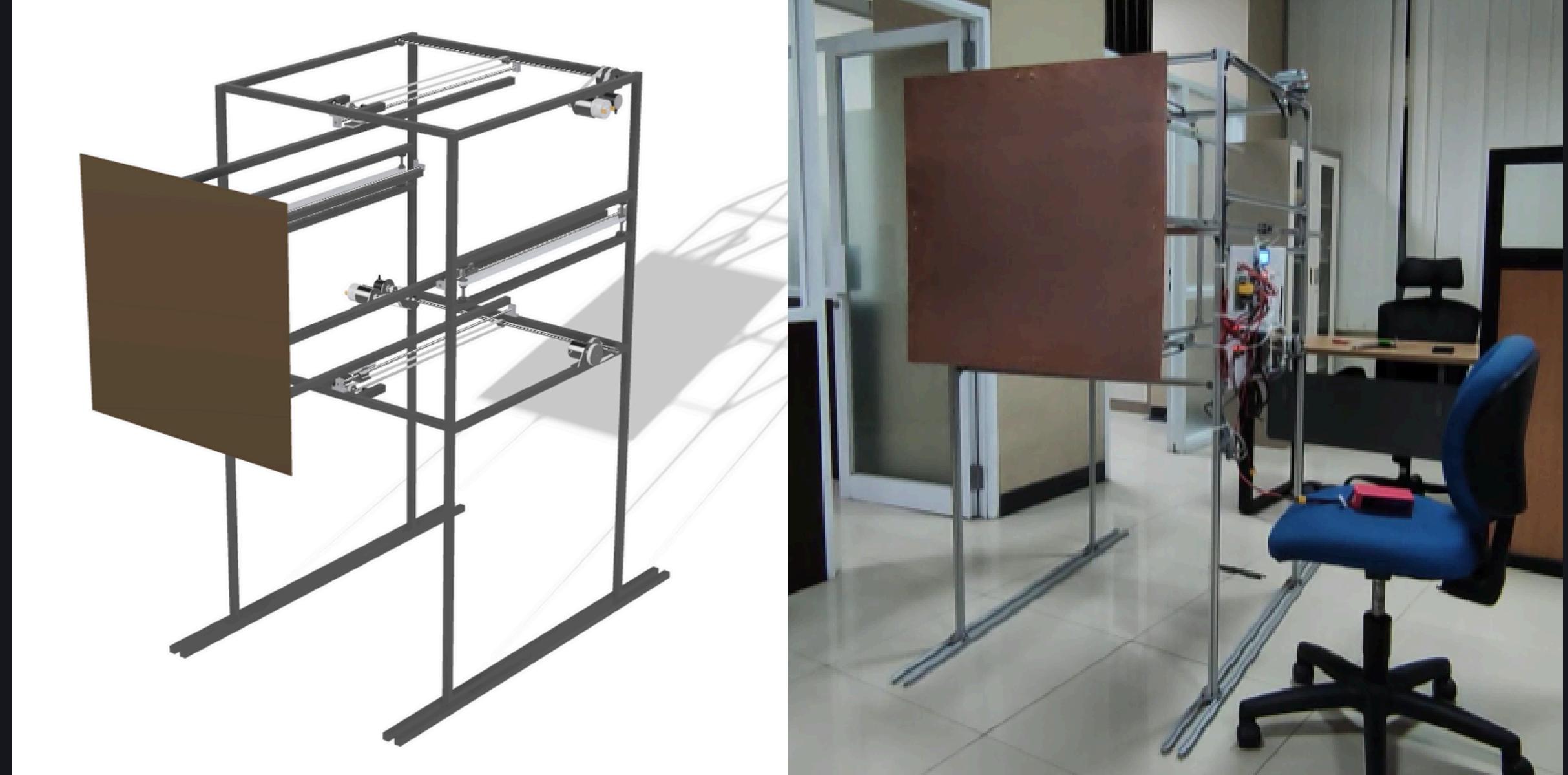
RADAR SLIDER FOR RESEARCH

DESCRIPTION:

An Automatic Mechatronics Slider, a radar/reflector device supporting state-of-the-art radar research.

TOOLS & SKILLS:

- 3D CAD
- Mechanism Design
- Grinding
- Drilling
- Hand Tools



ROLE:

Mechatronics Engineer (3D Design & Assembly)

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SELECTED PROJECTS

1. ABU ROBOCON ROBOTS

- Fully Self-Designed and Built Robots
- Competed at the National Stage of Indonesian Robocon (KRI)
- Full Game Points in Regional Qualification
- 4th Place Finish in the 2024 National Stage

Link: [abu-robocon-2024](#)
[abu-robocon-2023](#)

2. SKYWARD PROJECT

- 3D Design Specialist at Arthatronic Studio
- Designed and Manufactured for 3D Printing and Acrylics
- Executed Client-Specified Requests
- Contributed to Project Phases 1 & 2

Link: [skyward-project](#)

3. MECHATRONICS DISPLAY

- Full Component Selection and Integration
- Designed with Blueprints for Manufacturing
- Programmed and Synchronized Six Motors Seamlessly
- Featured at Munas Reprobing Event

Link: [mechatronics-artifact-display](#)

4. MAGGOT FEEDER

- Client Project for Innovillage Team
- Full Component Selection for Blueprints
- Developed Design Concept with Blueprints for Manufacturing
- Recognized by Telkom University

Link: [maggot-feeder](#)

5. AUTOMATIC CAT FEEDER

- Fully Self-Designed and Built Mechanism
- Incorporated Sensors, Actuators, and Microcontroller Integration
- Optimized Design for 3D Printing
- Achieved A Grade in IoT Class

Link: [automatic-cat-feeder](#)

6. RADAR SLIDER

- Supported State-of-The-Art Radar Research
- Fully Self-Designed and Built Mechanism
- Incorporated Sensors, Actuators, and Microcontroller Integration
- Adaptive Design for Radar Size Adjustment

Link: [radar-slider](#)

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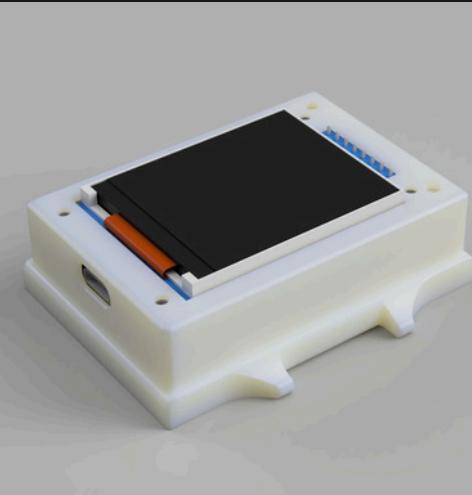


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OTHER PROJECTS

Link: [other-projects](#)



SMART WATCH

An arrhythmia detection watch.



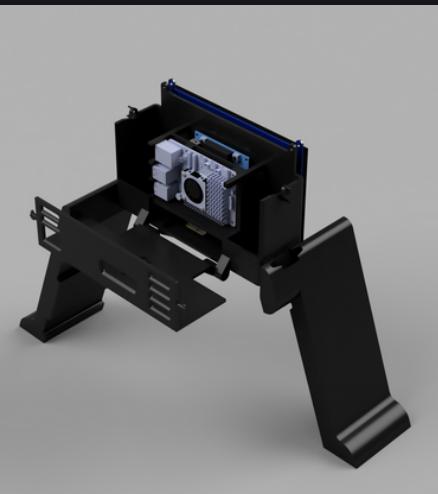
PANEL BOX

Custom electronic panel boxes with displays.



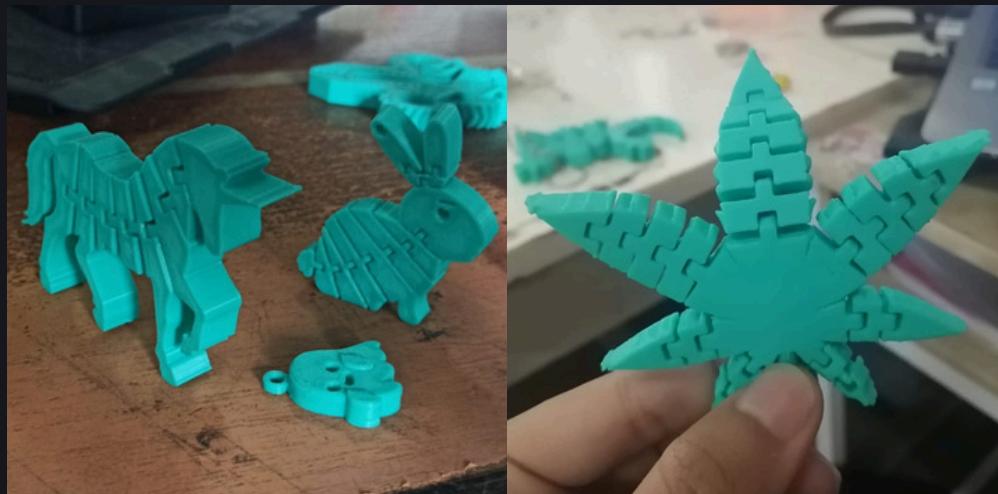
GRIM REAPER

A 3D printed grim reaper figurine.



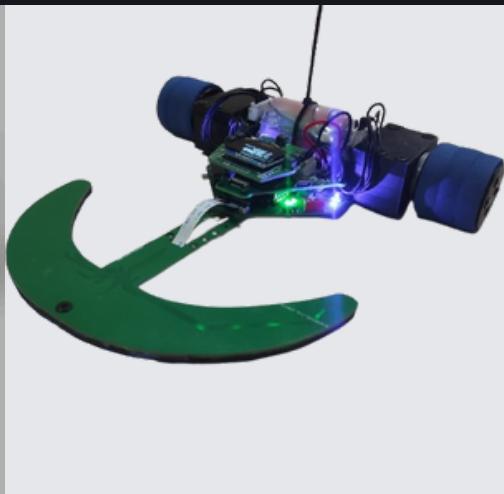
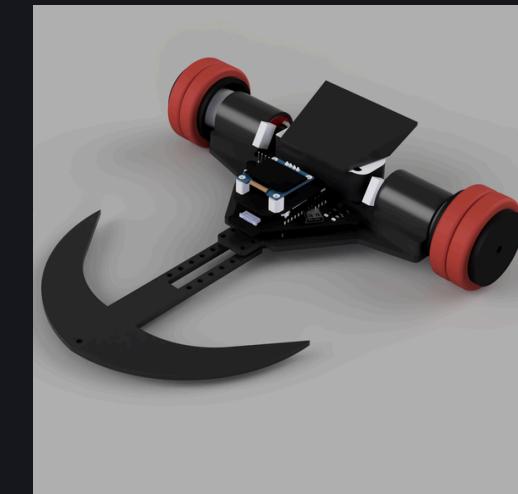
PROTABLE CAMERA DEVICE

A vena detection device using raspi camera.



FLEXIBLE KEYCHAINS

Various 3D printed flexible keychains.

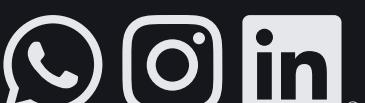


LINE FOLLOWER ROBOT

An educational modular robot concept.

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OTHER PROJECTS

Link: [other-projects](#)



ACCESSORIES, MINIATURES, TOYS, KEYCHAINS, MOCKUPS, PROTOTYPES, ETC

and more design & printing requests....

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Contacts:

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CONTACTS & LINKS

More documentations, details, price lists, and free consultations, reach us on:



WhatsApp: wa.me/+6282182227816



Instagram: instagram.com/ariqshaq



LinkedIn: linkedin.com/in/ariqshaq



GitHub: github.com/ariqshaq/3d-design-portfolio

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