

MIRA-M₁

Magnetic Imaging and Reconstruction Array

Milestone 4

MON-08

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Project Description

- What is it?

A magnetic field camera that senses the magnetic field distribution around an object and provides an interactive 3D visualization.

- Who is it for?

Engineers: For device design and detecting defects in permanent magnets.

Researchers: In electromagnetics and materials science.

- What's the problem?

Current tools offer only point-by-point measurements, making field analysis slow and limited in insight.

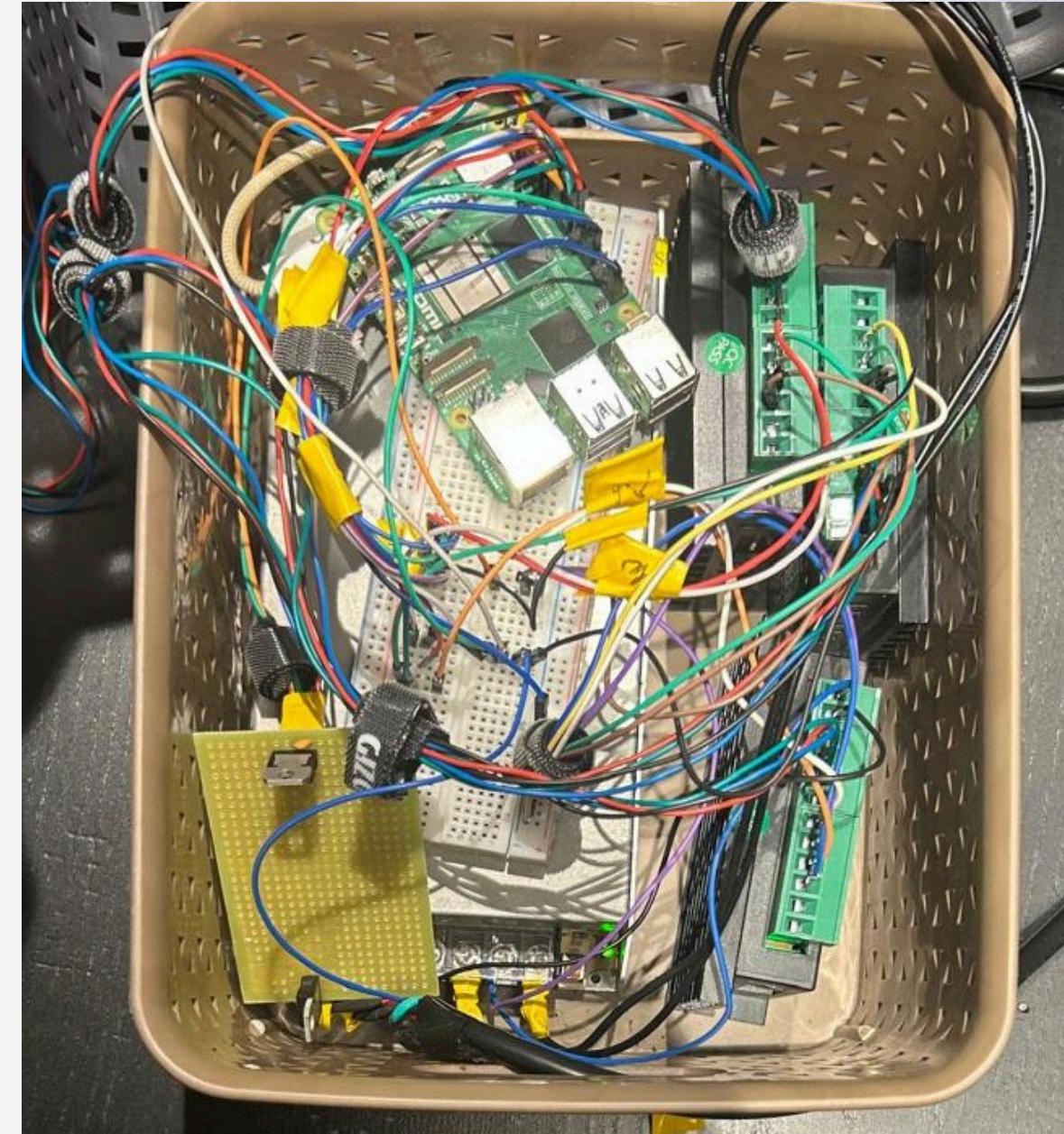
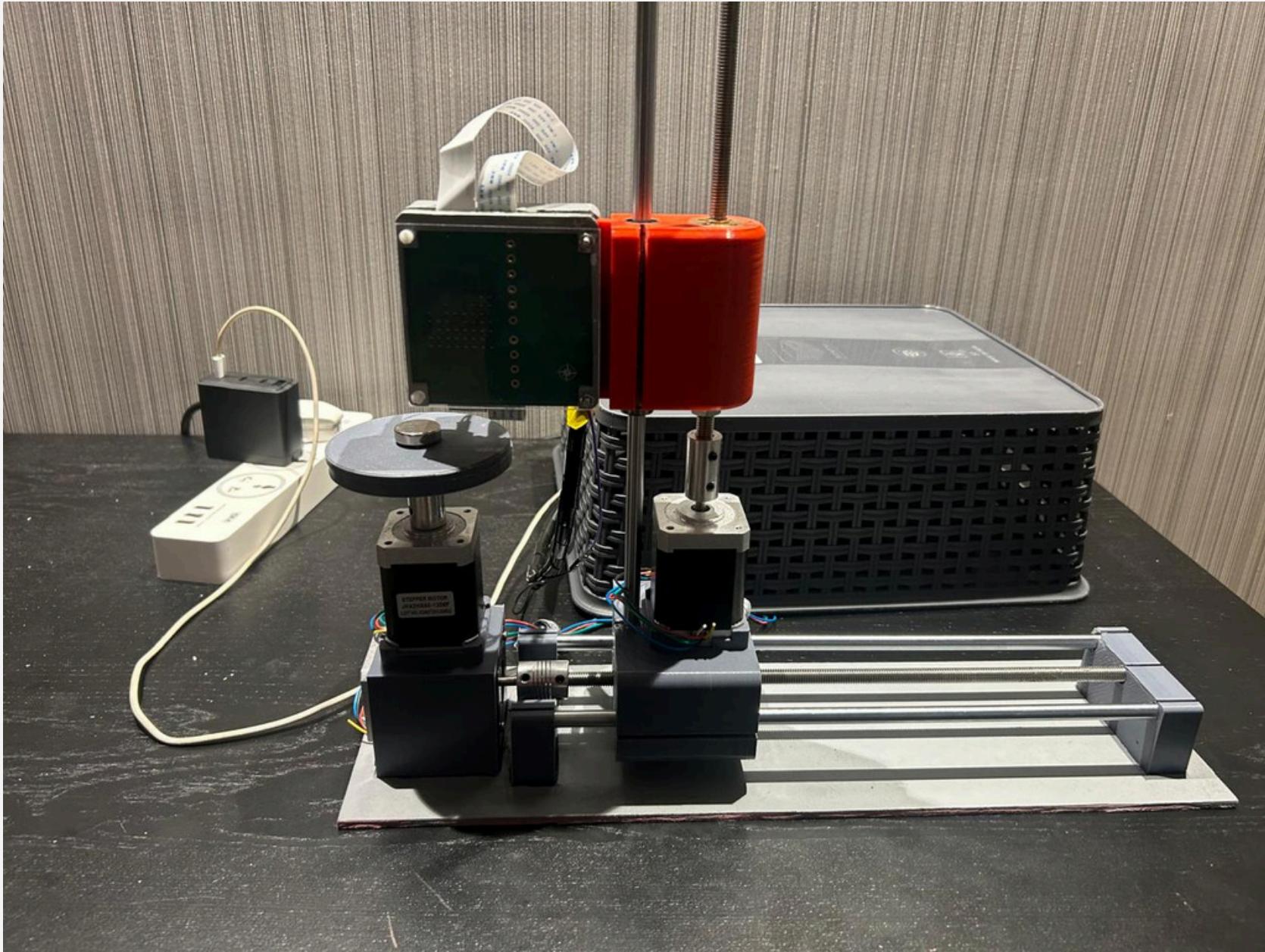
- Our solution

We offer a high-resolution, automated system to quickly visualize and analyze magnetic field distributions — helping users extract meaningful insights faster.

Project Status

Key specifications and requirements proposed at beginning of semester	Status at end of semester	Remarks/Justification
Millimeter spatial resolution of points in the visualization (2mm)	Complete	Achieved a 1.75mm resolution
Real time imaging of the magnetic field (30 fps)	Complete	Achieved an average of 80 fps
Field sensitivity better than 1 mT	Complete	0.2 mT sensitivity achieved

Final Prototype



Final Prototype

