

ROBOT ARM AR4 MK3

Independent Project | Computer Programming (Dr. Santos) 2025/26

MINKANG | JUNGIN | YERIN | YUSEI | HWISANG



2026
CURRENT



GOAL

- Incorporate our *Python-based* computer programming learning into a machine; we did this by building a *robot arm*.
- We aim to build a machine/robot that functions as planned.
- Further progress this project

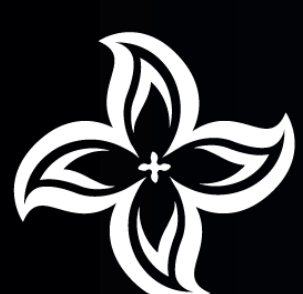
CHALLENGES

- **Multiple technical challenges**
 - Limited materials available
 - Difficulty aligning and assembling parts correctly
 - Wires becoming loose or disconnecting after soldering
 - The motor did not fit properly into the base during Winter Break build
 - Identified issue as misalignment/inconsistent placement of parts
- **Resolved by**
 - Reorganizing components and sanding parts for proper fit
 - Had to adapt and make compromises throughout the process:
 - Worked out of the intended order
 - Substituted parts when kit components differed from instructions

NEXT STEPS

This year was our first year on this robot arm project, and we plan to use it next year in *Machine Learning*, where we hope to expand it. Some potential plans include:

- Attaching sensors
- Putting in sophisticated *data* (train the robot)
- Increasing the number of fingers for more intricate tasks
- More advanced *coding*
- More mobility



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