PROTOTYPE

MARK II

Prepared to be wowed, and then inspired!

Button Switches: Switch, start and end tasks

Slide Switch: Switch direction

Potentiometer: Set speed limit

Finest soldering work and construction of HMI

Real-Time communication and control

I2C: Upgraded serial communication method, faster than UART

Baseboard

Buzzer: Indicate system status and play music

LEDs: Indicate system status

LCD: Display system status

Microphone: Start tasks

Encoder: Set speed and target

Arduino Nano: Microcontroller board based on **ATmega328PB**

H-bridge PCBs: Switch the polarity of the voltage applied to the load to control the direction of DC motors

Encoder value was used as feedback

Run faster than most, Ranked the second place in 10 M race

Main Functions:
Session 1:
- Spin on a spot
- Traverse a 1 M square
- Run 10 M straight

Session 2: Manual setup of direction, speed and target for certain tasks

Group 7
Jingxiong YU 20123738
Dongsheng SHI 20124863
Jiaying ZOU 20125041
Yiming CHEN 20124994