

ENGN1211 GROUP F04 ROVER PROJECT
MILESTONE 2

Members & Contribution

- Wana: Design Concept Illustration - “Tank track”
- Suowei Hu: Design Concept Illustration – Rounded Burger
- Ar-J: Design Concept Illustration - Siege Tower
- Zixuan: Design Concept Illustration – Trolley
- (We later voted to decide on the top 3 concept that is suitable for implementation.)

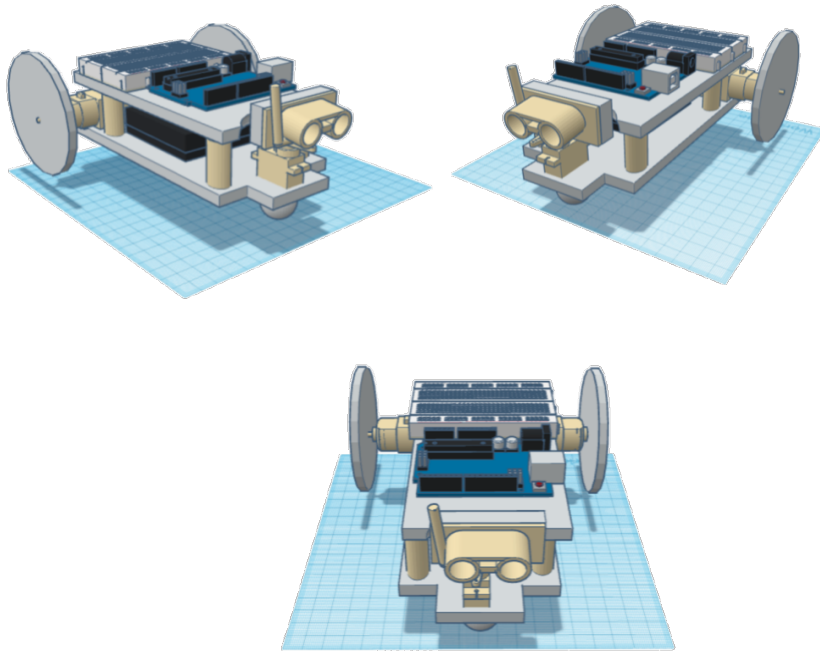
Design Specification

Design Specification	Quantity	Units
Price	Australian Dollars	AUD
Rover Dimensions	Length and width	Square meters
Hold components in place during movement	Carrying Capacity	Kilograms
Cleanly managed wires	No Free moving Wires	Y/N
Sensor Mechanism	Sensor Range from front of rover	Meters
Algorithm	Able to solve maze autonomously	Y/N
Forward Movement	Deviation in movement	Radians
Turning/Rotation	Deviation in turning angle	Radians
Ground Speed/Velocity	Distance over Time	Meters per second
Overall Weight	Mass	Kilograms

3 Rover Concept

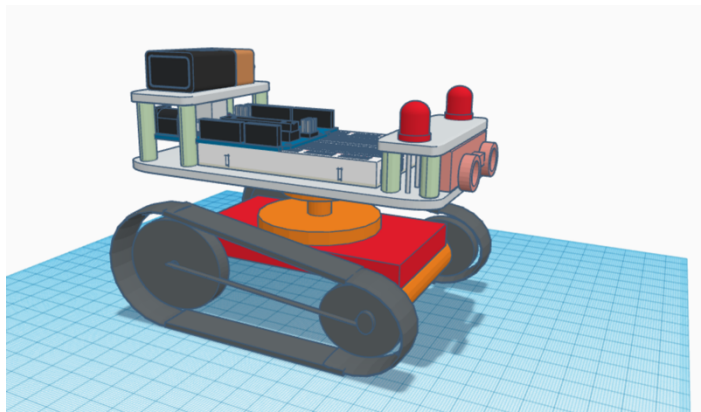
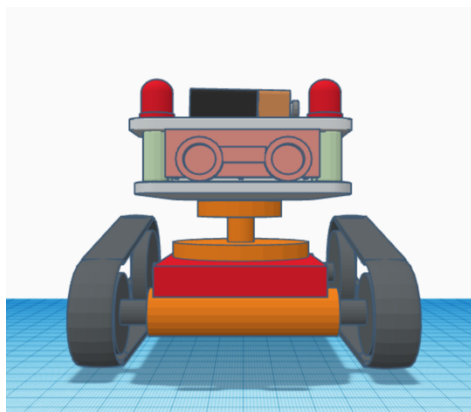
Rounded burger (Suowei Hu)

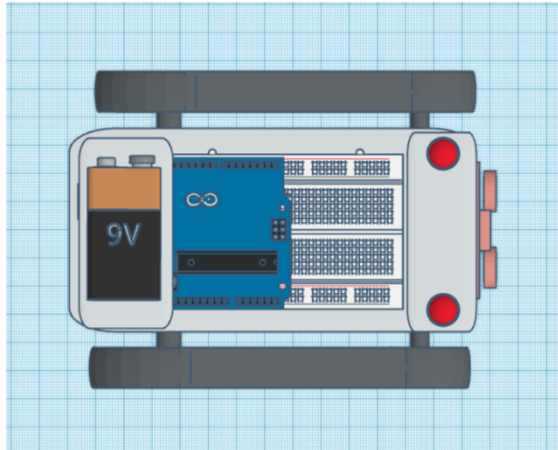
- Very compact, easy to get components and make.
- ≥ 2 layer of space (1 for battery pack, 1 for breadboard).
- If needed, add another layer of PCB plate can hide the wires.



"Tank track" (Wana Azman)

- Require extra parts (3wheels + 1track pair)
- High stability
- High Precision movement
- Accurate Rotational Movements
- Large Mass





Siege Tower (Ar-J)

- Can fully turn in place with minimal displacement.
- Smallest area possible for rover dimensions.
- Needs strong material to be able to hold components aloft.
- Off – centre motors may require attention in programming algorithm or in construction.
- Higher centre of gravity may affect balance of the rover.

