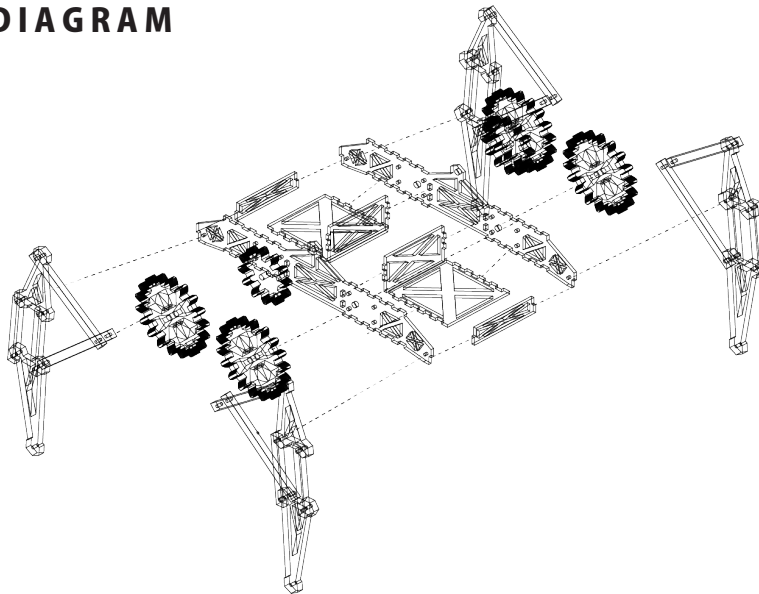


4 LEGGED WALKER

Zongxi Huang

Though the wheel has been a crucial invention, it is not without its flaws. For instance, it has trouble climbing stairs and is prone to bug down in uneven terrain. In response to these issues, I chose to adopt walker design that would allow us to overcome these challenges. This project is a continuation of the legged walker I worked on last semester. With the experience I gained from experimenting with legged robot designs, I decided to change the design completely and to start anew. For this new walker robot, I decided to make it as lightweight as possible by removing unnecessary pieces from the structure without compromising the overall integrity. Furthermore, I implemented a new leg design and linked the motion of all 4 legs with gears in order to improve the robot's effectiveness at walking. In addition, 4 new motors were used to allow the walker to move at faster speeds and to improve its terrain crossing capabilities. Despite these major changes, the robot can be controlled relatively easily through a remote controller.

CONSTRUCTION DIAGRAM



FUNCTIONAL DIAGRAM

