Design Brief

Client	Ms. Guzman
Target Consumer	Manufacturers, warehouses, healthcare systems, food/beverage producers, and large-scale logistics operators.
Designer(s)	Matthew Jeide, Preston Maxwell, Samuel Webster
Problem Statement	Manual handling of cargo can introduce errors, safety risks, and inefficiencies. A significant number of hours in manufacturing/warehousing are spent moving materials manually, this time could instead be dedicated to higher-value tasks if this process could be automated.
Design Statement	We will design an AGV (automated guided vehicle) to automate these tedious processes. The AGV will be compact to increase efficiency in both cost and power.
Criteria	1. Able to pick up and store cargo. 2. Able to drop off cargo and able to retrieve cargo from storage. 3. Follows a designated colored path on the floor. 4. Able to recognize cargo on its path to pick up.
Constraints	1. The design must be cost-effective, given only 3 motors and a servo. 2. The weight should be minimal. 3. The design must be structurally sound. 4. The prototype must be able to balance itself and move.