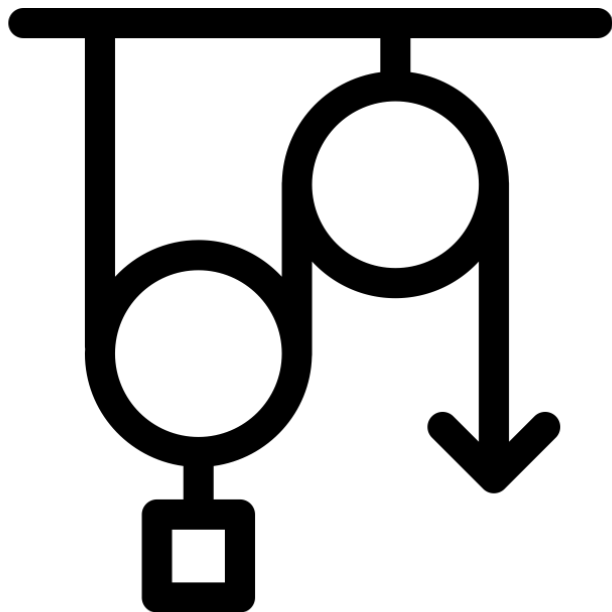


Friction Force Explorers

Don Zheng, Neil Jassal, Rachel Holladay

Metrics Used

Metric #1: Mechanical Complexity



Created by LAFS
from Noun Project

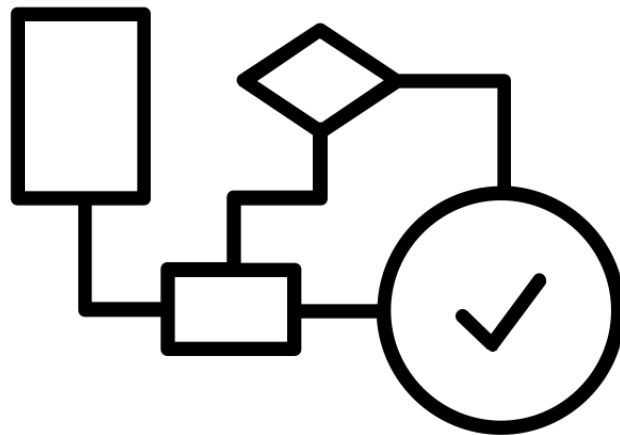


Created by Guilherme Simoes
from Noun Project

Metric #2: Algorithmic Interest

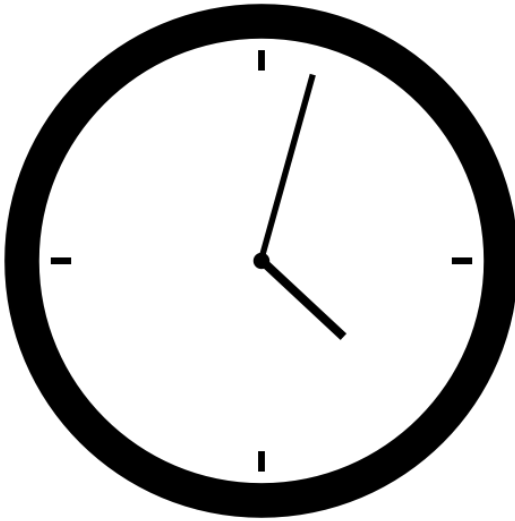


Created by Michael V. Suriano
from Noun Project

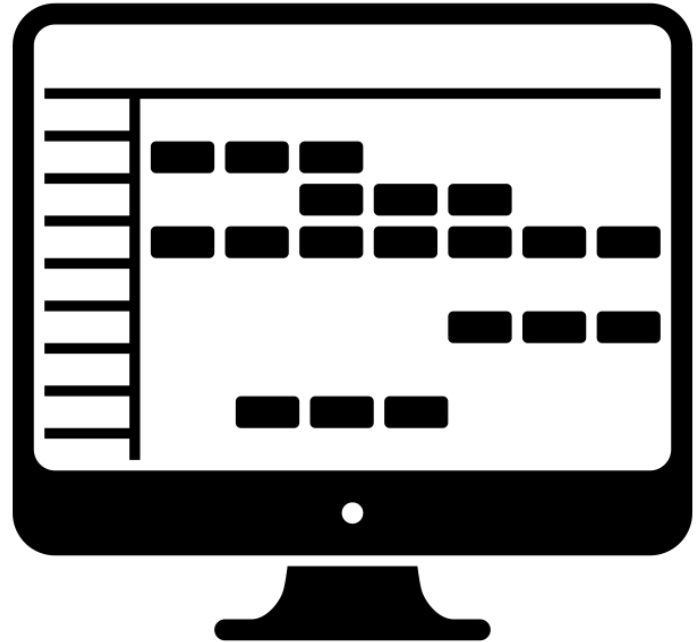


Created by Sergey Novosyolov
from Noun Project

Metric #3: Time

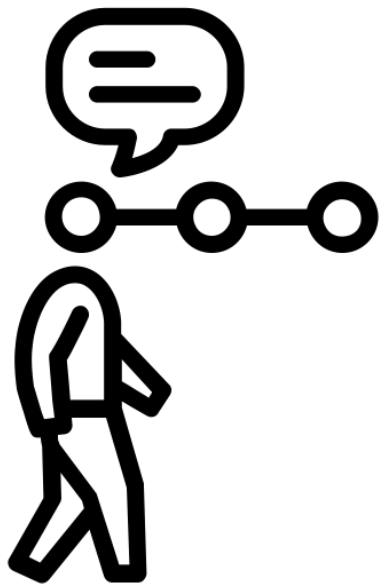


Created by Alessandro Vigoni
from Noun Project



Created by Dale Humphries
from Noun Project

Metric #4: Usability

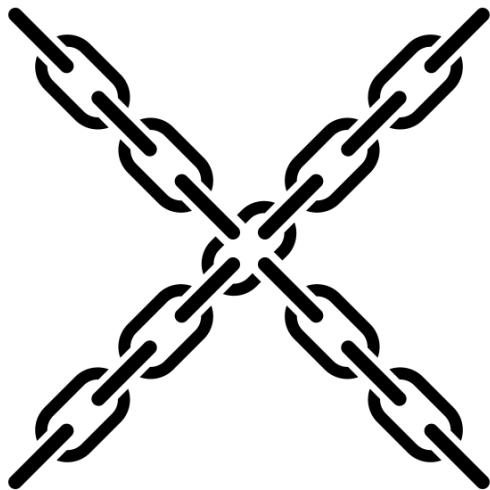


Created by Yu Luck
from Noun Project

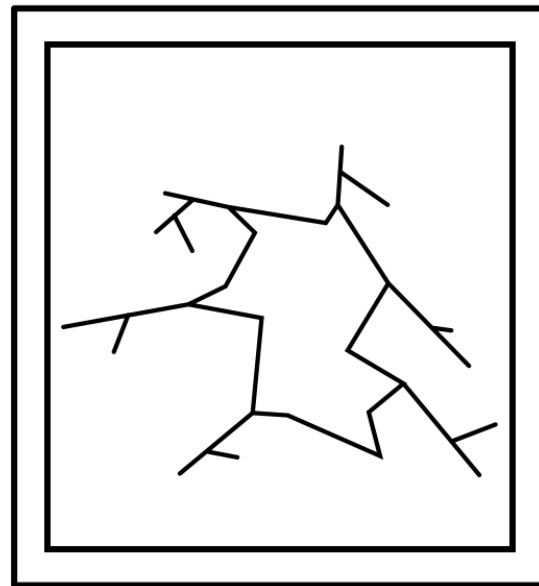


Created by hans draiman
from Noun Project

Metric #5: Durability



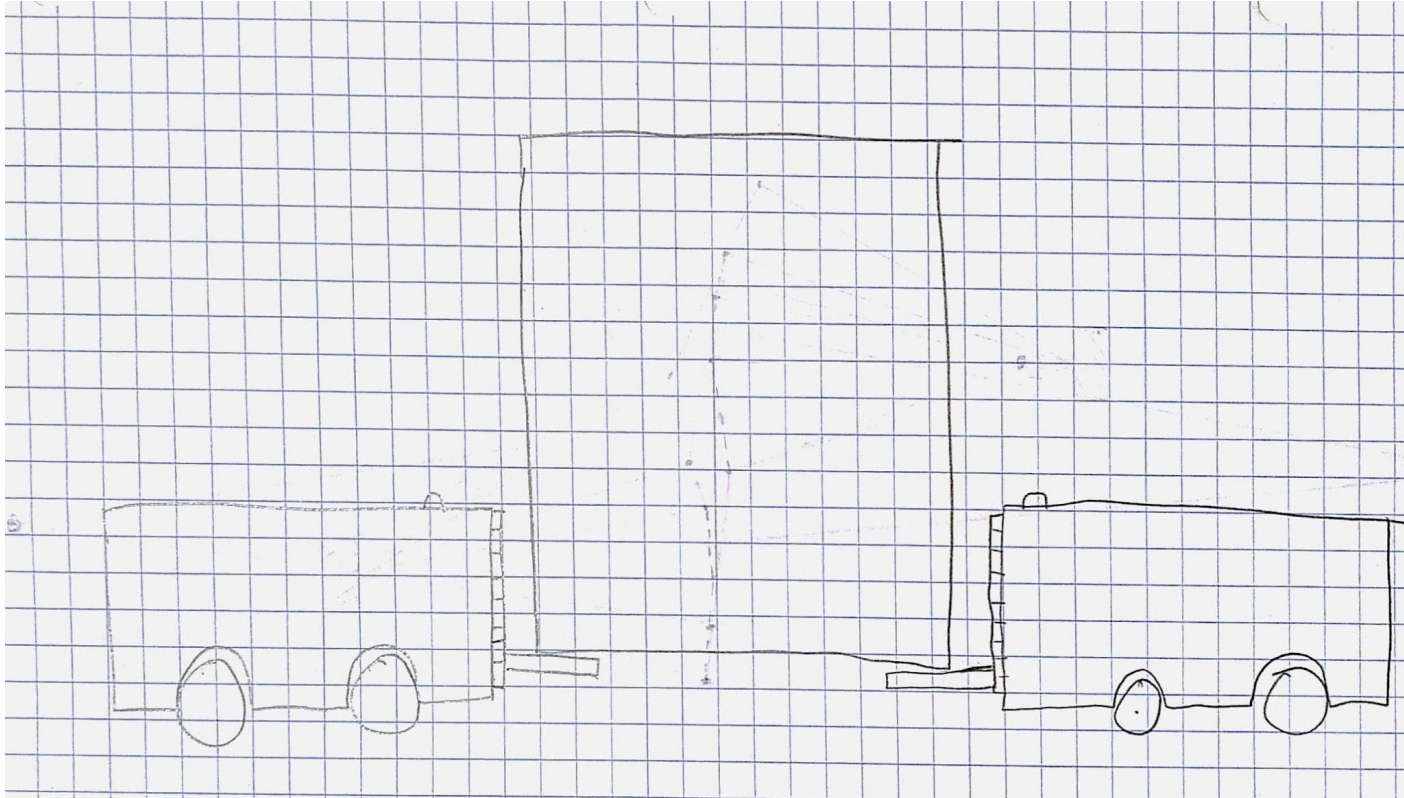
Created by Aaron K. Kim
from Noun Project



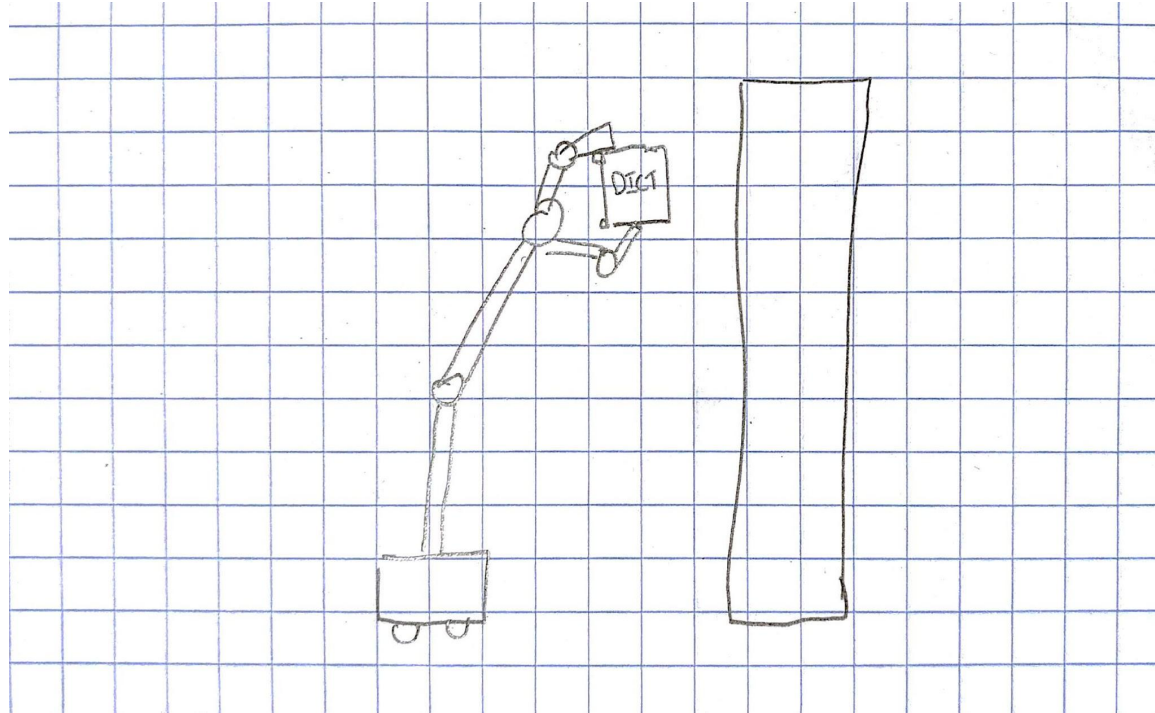
Created by Mayur Bhat
from Noun Project

Robots to Be Evaluated

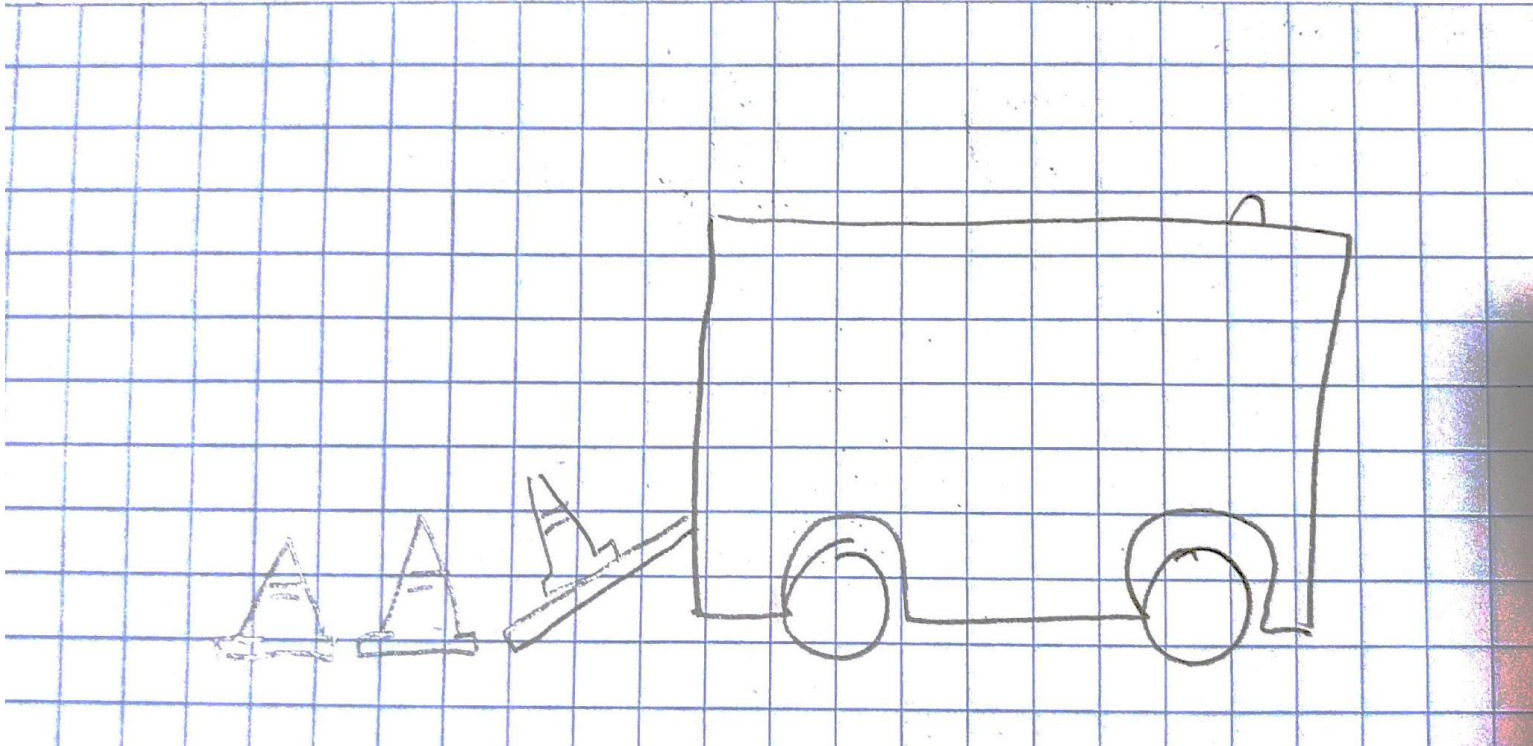
Robot #1: Multirobot Movers



Robot #2: Robot Librarian



Robot #3: Cone Laying Robot



Alternatives Evaluation

			Multi-Robot Movers		Robot Librarian		Cone Laying Robot	
Evaluation Criteria	Priority (1-5)	System Attributes (Relevant Feature)	Metric Score (1-5)	Weighted Score	Metric Score (1-5)	Weighted Score	Metric Score (1-5)	Weighted Score
Mechanical Complexity	-5	# of mechanically significant parts	2	-10	4	-20	5	-25
Algorithmic Interest	3	# of interesting problems	4	12	2	6	3	9
Time to build	-4	Schedule predictability	2	-8	3	-12	4	-16
Usability	1	Startup potential	3	3	2	2	5	5
Durability	-2	# of fragile mechanical components	1	-2	3	-6	2	-4
				-5			-30	-31