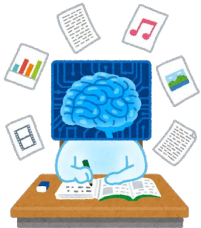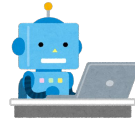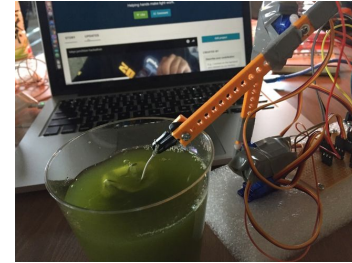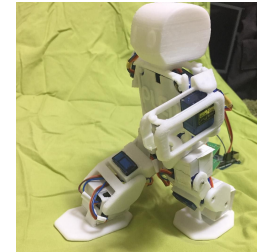# Yoovraj Shinde

Co-Founder @ MLTokyo

Introduction

- Electronics Engineering
- Java Backend, Front end, Batch system
- iOS App development.
- Interested in Machine Learning and Robotics

Ocha Robot Arm

Learner Robot

BrainSwarming Introduction

Developed by Dr. Tony McCaffrey

Stuck Truck Problem

A driver got the truck stuck beneath the underpass.

How can the driver alone free the the truck while doing minimal damage to both the truck and the underpass?

liberate truck from underpass

Truck   Road   Underpass

liberate truck from underpass

Slide
Truck

Lower
Truck

Lower
Road

Elevate
Underpass

Truck

Road

Underpass

liberate truck from underpass

Slide
Truck

Lower
Truck

Lower
Road

Elevate
Underpass

Wheels

Suspension

Surface

Debris

Walls

Engine

Truck

Road

Underpass

liberate truck from underpass

Slide
Truck

Lower
Truck

Lower
Road

Elevate
Underpass

Deflate
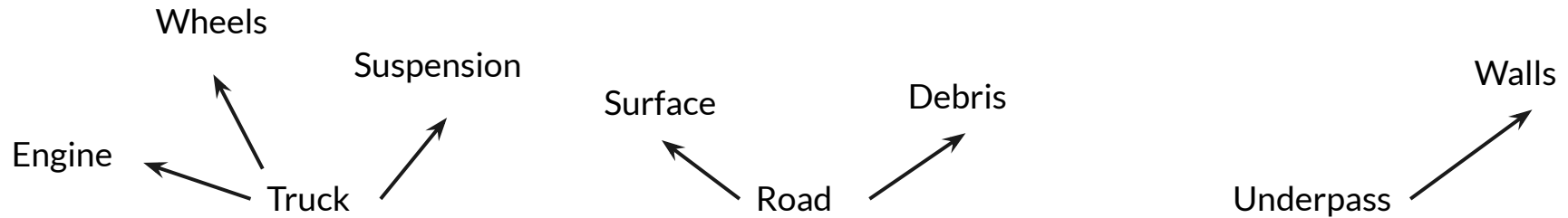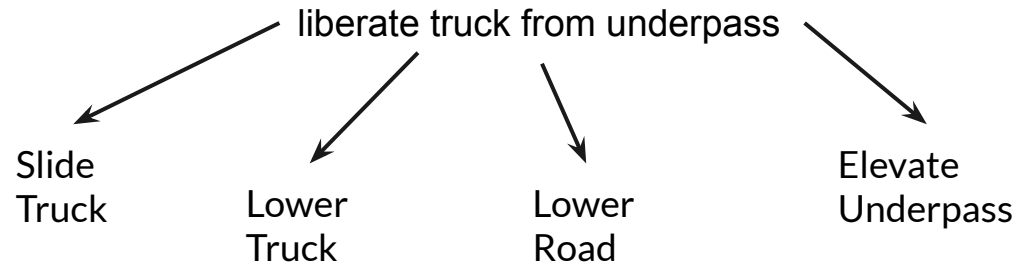Tyres
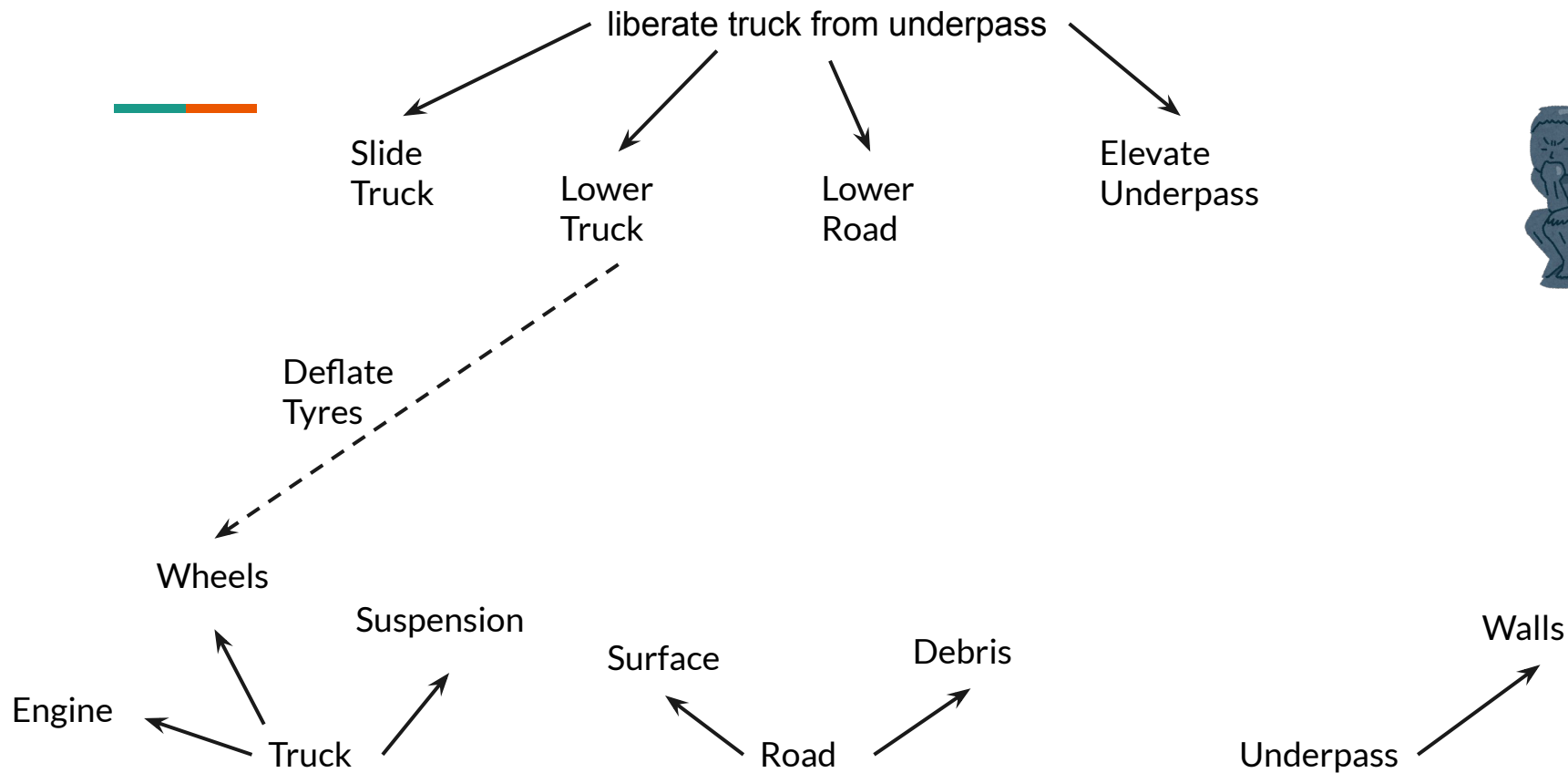
Wheels

Suspension

Surface

Debris

Walls

Engine

Truck

Road

Underpass

Benefits

- No one tries to dominate in the team
- Extroverts and Introverts work together
- Visualization of ideas giving clear picture
- Faster generation of ideas
- Organized way of brainstorming

Brainswarming in Action

Use ML on devices

Application					
Algorithm	CNN	Real time			
Data	Health	User data	Audio data	Agro data	
Devices	Mobile devices	Roomba	Signage board	Alexa	Router
Data Source	Sensors	Motors	Speaker	Mic	

Team formation

Introduction

Define goal

Define resources

Make graph

Discussion

TakeAway (1hr)

Team Formation

Random Team members selection on lottery

Introduction

Members introduce one by one in their team in about 5-8 min.

Following points can be used to let people know you

- Name
- Interests in different fields
    - Eg : Electronics, Computers, Civil, Mechanical, Chemical
- Reason to come to this meetup

Define Goal

Define a more concrete goal based on following general goal of meetup

- Generate feasible ideas which can use the power of embedded machine learning in various field of engineering.

Define Resources

Define all possible resources which you can think of that can be used.

It could be as basic as sensors or already developed device.

Make Graph

- Connect resources to goal.
- Create intermediate layers. For example create new resource by combining multiple resources.

A network from resource to goal corresponds to one idea.

You can have as many ideas as you want on the graph.

Discussion

- Actively discuss among the team.
- Share your view
- Listen to other member's opinion
- Incorporate the feedback into the idea

TakeAway (1 hr)

- Among all the ideas generated, get the top voted 2-3 ideas.
- Share what your team has generated ideas with other teams
- Each team will get 6-8 min to present their work done during the meetup.

- Idea
- Method
- Dataset
- Hardware
- Expected Accuracy ?

What you get from this Ideathon

- Ideas generated become candidates for projects
- Some ideas may require workshops to be hold to bring members of MLTokyo on same page
- Conducting Study Group sessions to realize the ideas.
- Take ownership and create a project team or a workshop under MLTokyo.

Site : https://machinelearningtokyo.com/

GIT : https://github.com/Machine-Learning-Tokyo

Thank you