Development Project:
Build a Cyber Physical Rover

Motivation:

- We want to have a "test platform" of Cyber Physical Rovers. For example:
- **cars that follow one another in some type of platoon**
- **robots that collectively help one another out**

Your Task:

- Build one car for now using available material
- Make the car autonomously **follow a pre-plotted course**
- This requires some sensors

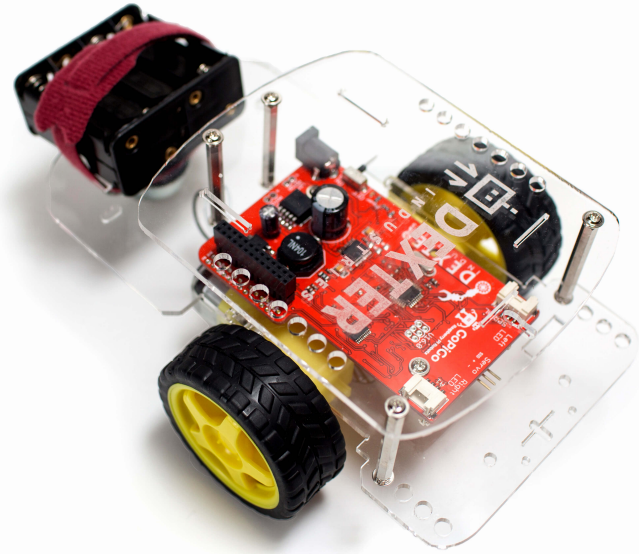
Development Project:
Build a Cyber Physical Rover Hive

Motivation:

- We want to have a "test platform" of Cyber Physical Rovers. For example:
- **cars that follow one another in some type of platoon**
- **robots that collectively help one another out**

What we have:

- We have a set of four **Gopigo robot kits** w/ Raspberry Pi
- Heterogeneous hardware: **each robot has unique features**



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Development Project:
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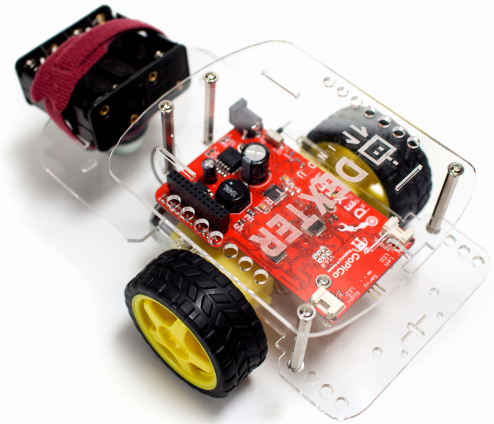
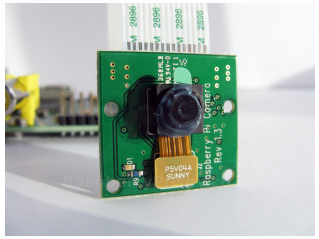


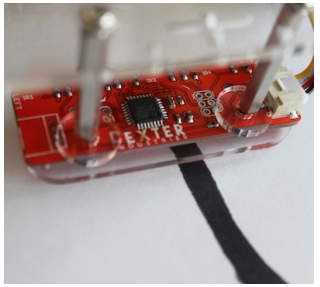
Base Hardware:

- Gopigo2
- Raspberry Pi and SD Card
- Wireless connector
- Servo kit



KITT:

- Raspberry Pi Model 3
- 16GB SD Card
- Distance Sensor
- **Camera**

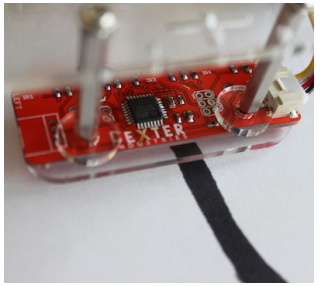


KAT:

- Raspberry Pi Model 3
- 16GB SD Card
- Distance Sensor
- **Line Follower**

KARR:

- Raspberry Pi Model 2
- 8GB SD Card
- Distance Sensor



PLATO:

- Raspberry Pi Model 2
- 16GB SD Card
- Distance Sensor
- **Line Follower**

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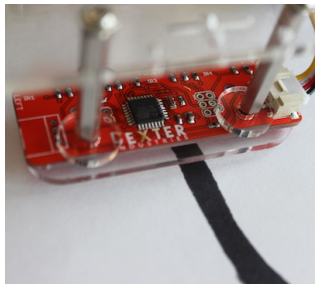
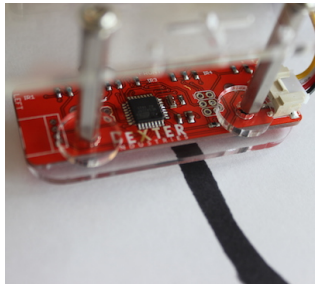
Development Project:
Build a Cyber Physical Rover Hive

Your Goals:



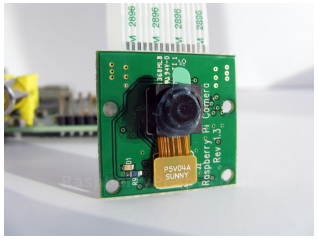
Team PLATO:

- Follow a course laid out on the ground.
- Explore the course.
- **Make a "map" of the course to share with other robots.**



Team KAT:

- Lead the hive.
- **Consider plato's map and decide where to go.**



Team KITT:

- Use OpenCV to detect a robot in your field of vision.
- **Follow that robot.**

Team KARR:

- Roam around
- Detect obstacles in the way.
- **Tell other robots**