Duayenler Ltd. Şti. **October 29, 2018**
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October, 21-29 Weekly Report

1 Progress

- [Erdem] Generally, DC motors types (for general robotics applications) are divided into 2, as listed below. Motors such as stepper and servo are omitted, since they are (possibly) not related with driving a vehicle.
  - Brushless DC Motors: Brushless DC motors do not use brushes. The rotor is a permanent magnet and the coils do not rotate, but are instead fixed in place on the stator. One advantage is energy efficient since there are no brushes to cause additional friction in the motor. Another advantage is durability, nothing to be broken inside. Moreover, the noise inside is lowered considerably which results in high torque and precision in controlling. These motors are mostly used in CD drivers and drones.
  - Brushed DC Motors: Brushed DC motors use the brushes to conduct current between the source and the armature. A variation of such motors is geared DC motors. They have a gear assembly attached to the motor. The speed of the motor is reduced with an increase in torque with the help of gear assembly. By usage of the gears, the speed of the DC motor can be reduced with an increase in torque. For controlling geared DC motors, L293D motor driver is normally used in hobby robots.
- [Erdem] Some important points on selecting the right motor are:
  - Electrical Characteristics: Op. voltage, max. current
  - Mechanical Characteristics: Motor type, torque (load, no-load), rpm
  - Battery: Battery should be capable of supplying required current

2 Plans

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3 Problems

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