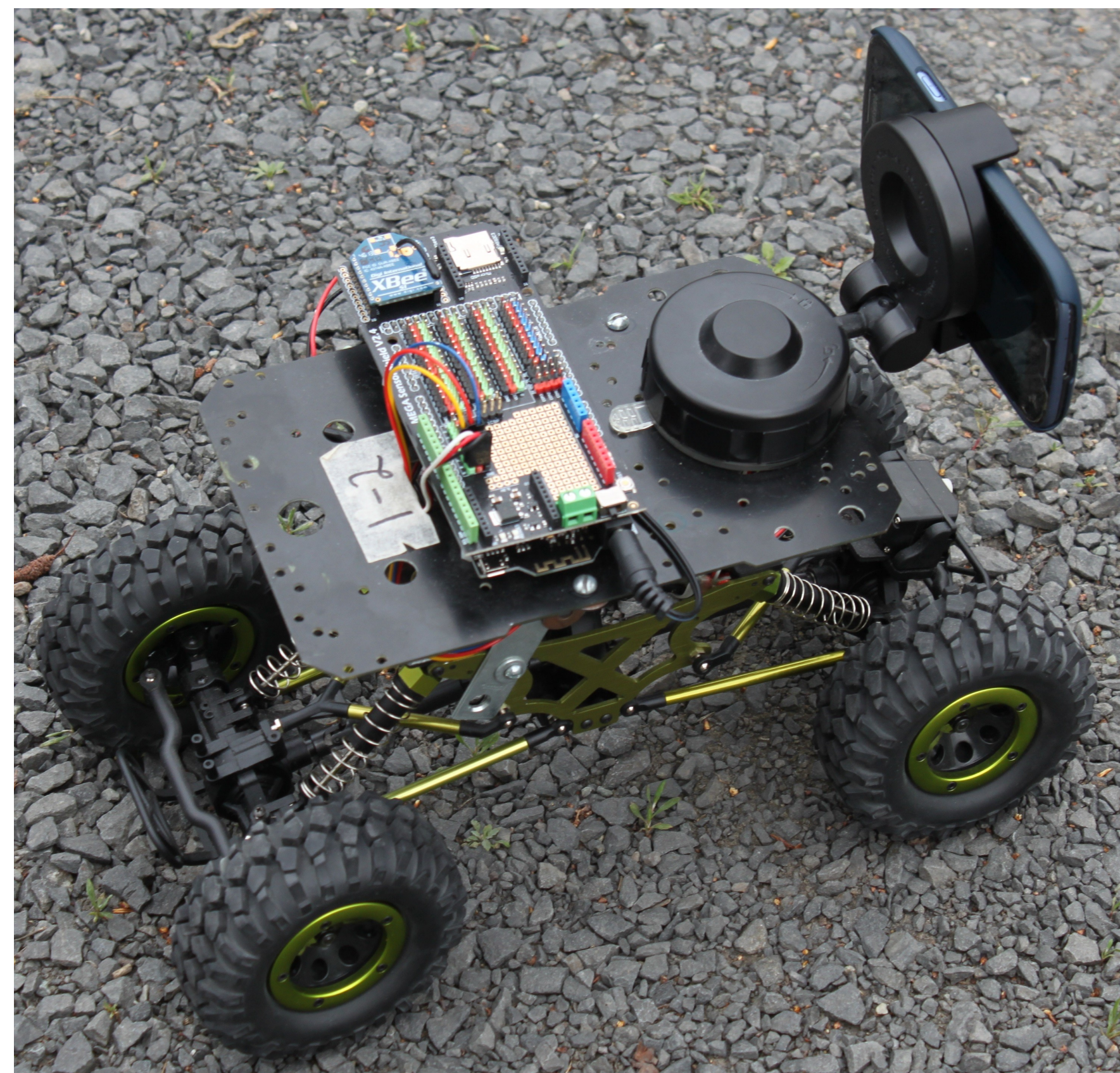


Robot Communication

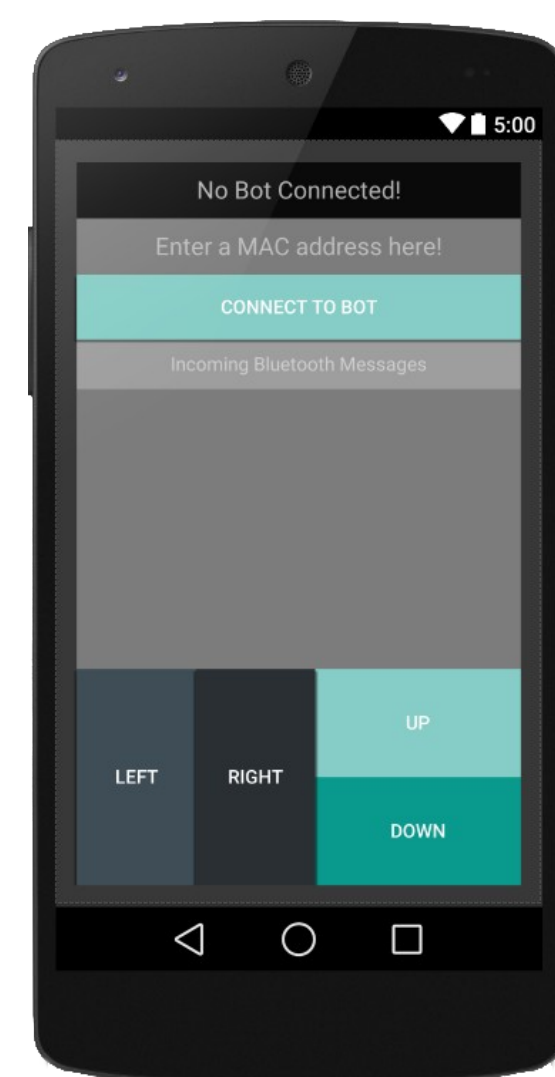
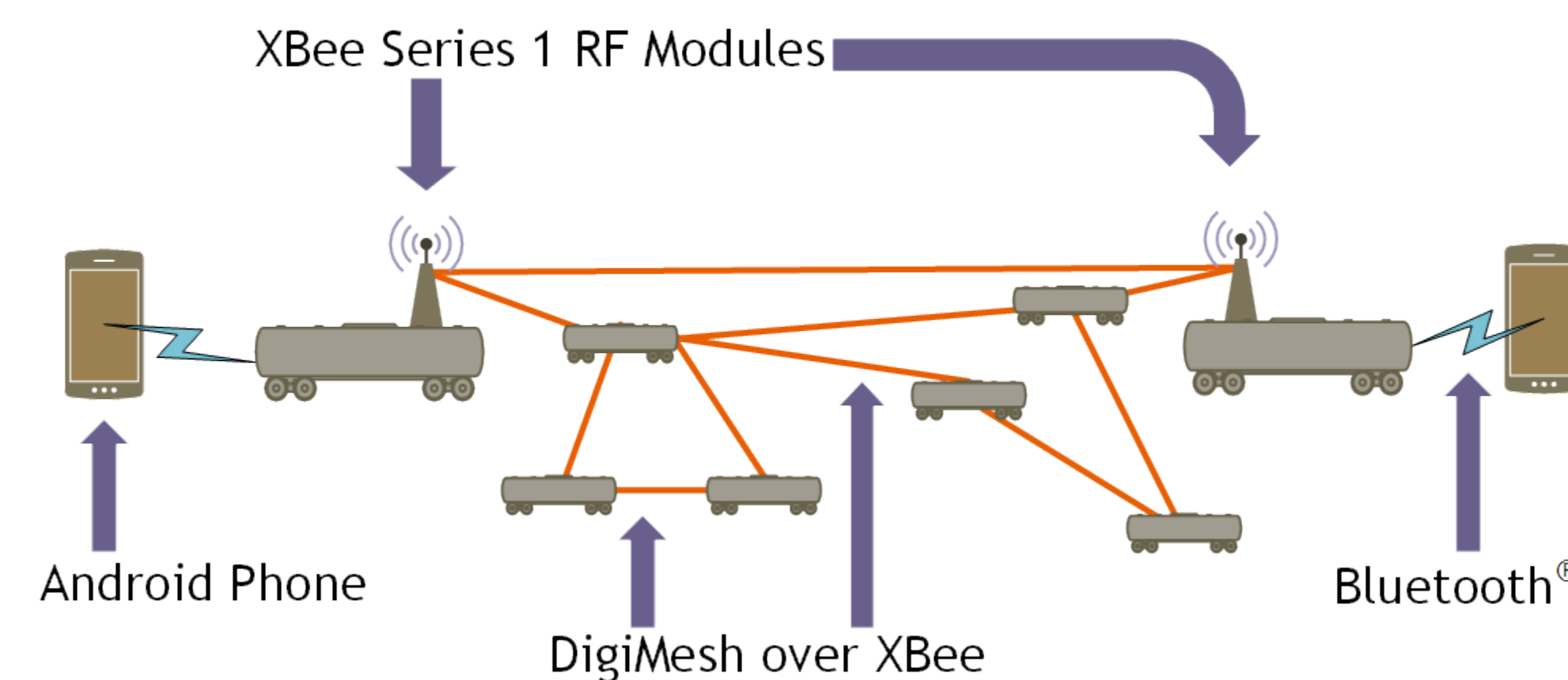
Commercial Off-The-Shelf Robots
For Artificial Intelligence



Achievements this Semester

Robot-to-Robot Communication with XBee Digimesh

- Robots can communicate using the robust Digimesh protocol



Android Human Interface App

- Enables debugging and remote control functionality via Bluetooth

Android API for Bluetooth Communication with the Robot

- Send and receive XBee packets
- Control robot hardware and motors

Bluetooth Command Parsing

- Enables the Arduino to be controlled remotely via Bluetooth

XBee Communication API

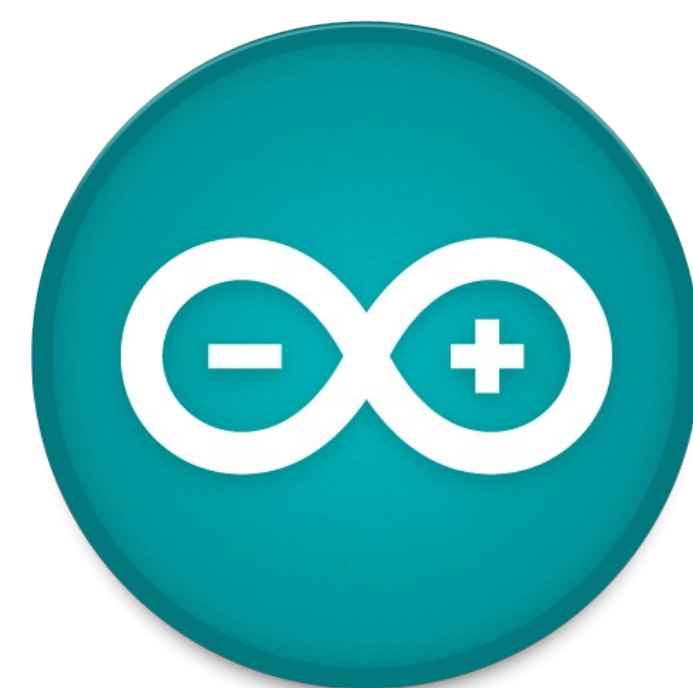
- Packets can be easily sent and received via the on-board XBee

Motor Control

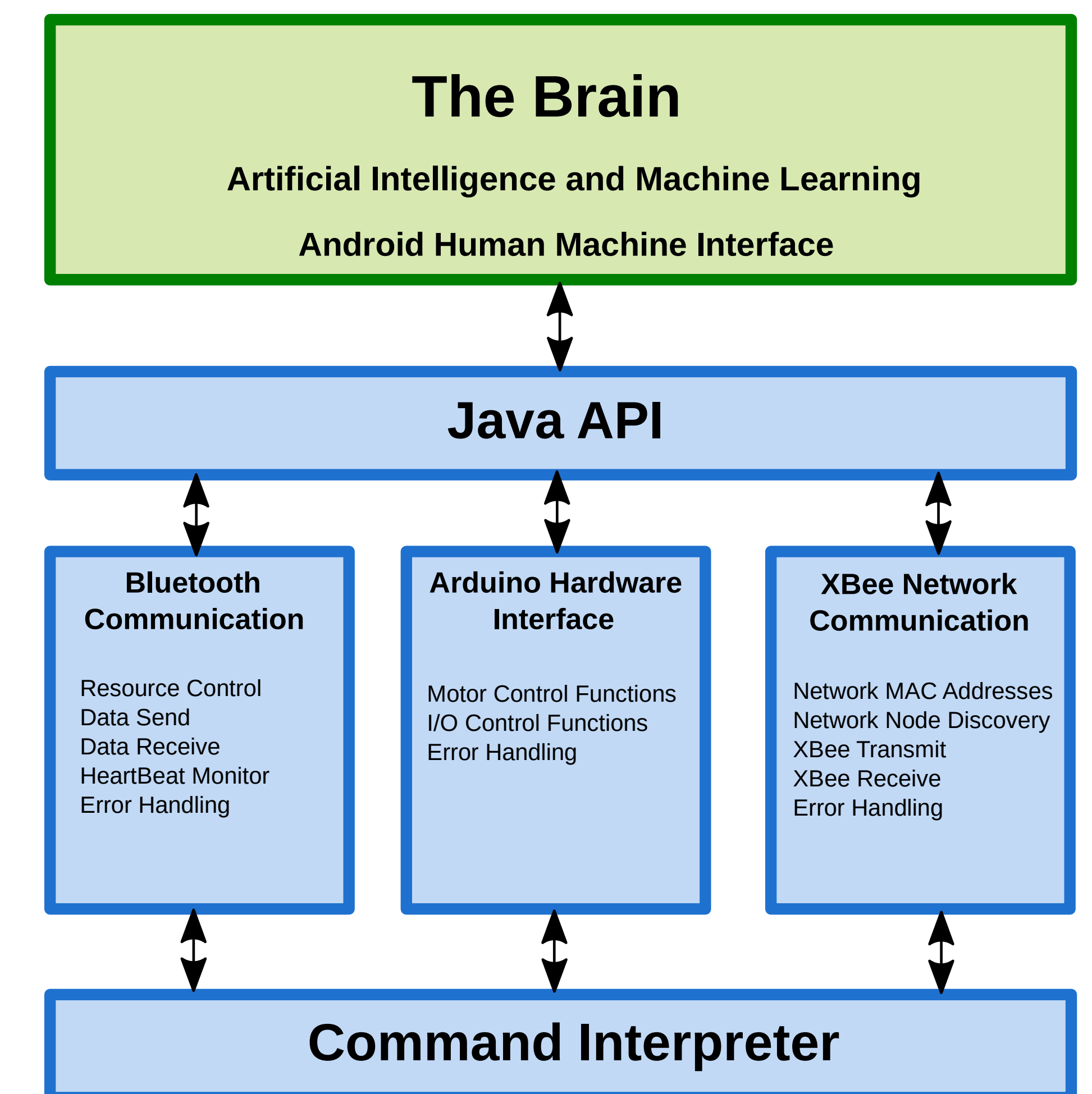
- Easily drive the motors attached to the robot

And Beyond . . .

- The Arduino has plenty of room for new technology and features. The existing APIs make integration a breeze.



Implementation Diagram



Project Goal

The goal of this project is to build a **cheap, easy to use** robot, capable of performing complex **artificial intelligence** driven tasks.

Project Requirements

- Affordable (< \$500)
- Easy to assemble
- Computationally powerful
- Programmable with modern languages
- Durable
- Communication between robots

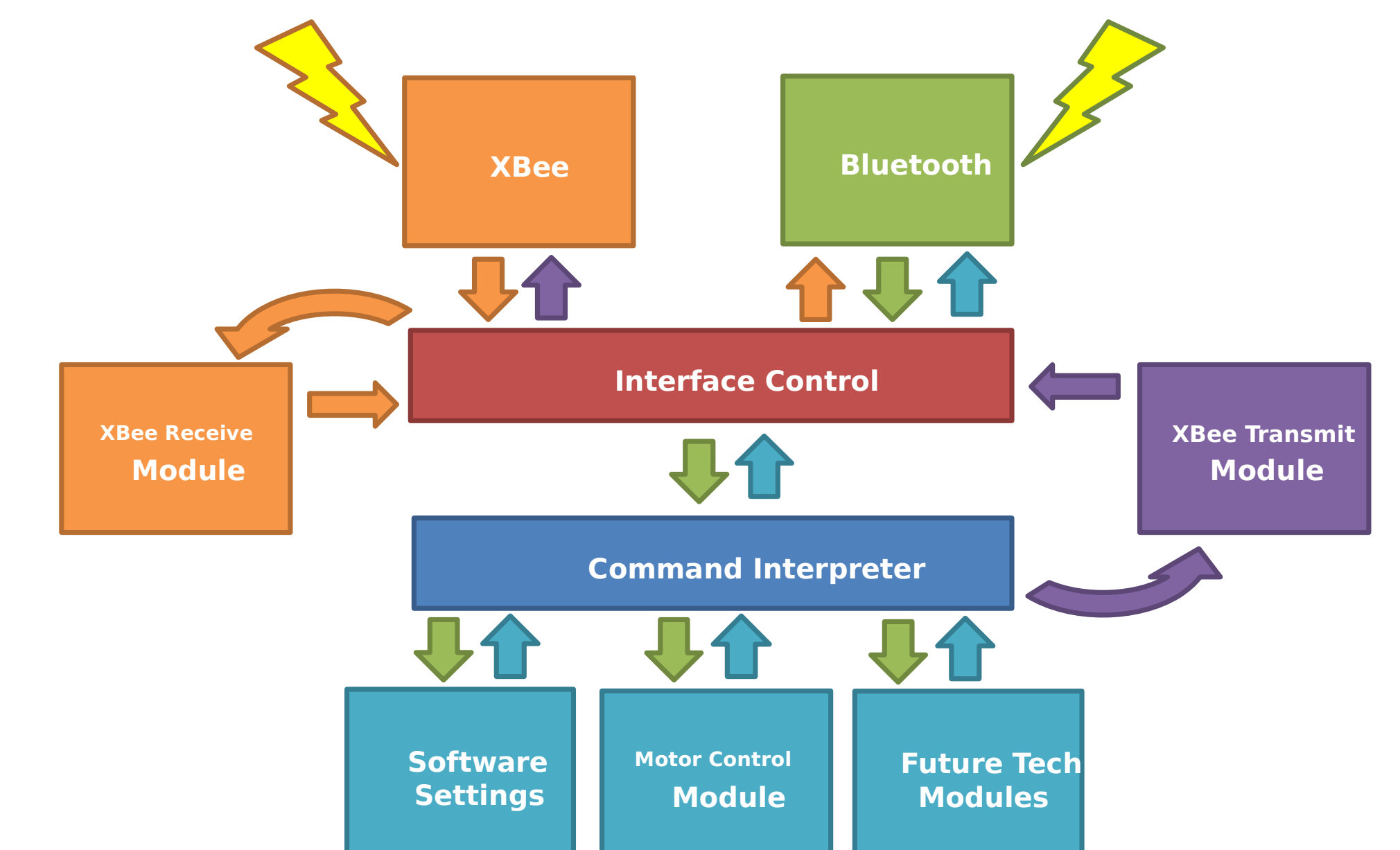
Project Sponsors

- Dr. Terence Soule
- Dr. Robert Heckendorn

Faculty Advisor

- Bruce Bolden

Arduino Firmware Diagram



Team CotsBots

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