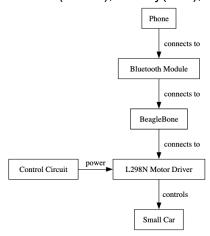
# **Group Information**

- 1. Group Name: BeaglePilot
- Group Members: Fanyi Luo <u>fla73@sfu.ca</u> Boxuan Lin <u>boxuan\_lin@sfu.ca</u> Laniqng Luo <u>fla217@sfu.ca</u> Yipeng Zhou <u>yza590@sfu.ca</u>

# **Topic Description**

- 1. System description: Control a car using an Android cellphone and a BeagleBone Green. Wireless communication between the BBG and the Android phone is a Bluetooth module. This project would allow the small car to go forward, back and turn around. A simple GUI will also be implemented on the Android end.
- 2. Additional hardware: motor driver(L298n), battery(12V), motors, wheels.



# **Time-Line**

# 1. Hardware Preparation

2.

# Week 1: Planning and Design

- Research and finalize the choice of hardware and motor driver.
- Design the schematic for the steering control circuit.
- Begin designing the remote control interface and establish a communication protocol.

#### Week 2: Hardware Assembly and Basic Testing (Milestone 1)

- Procure components and assemble the steering control circuit.
- Write basic code to test motor actuation.
- Initial testing of RF communication between the remote and the car.
- Review progress and address any immediate issues.

# Week 3: Software Development and Integration

- Develop and program the BBG with the final steering control code.
- Integrate the steering control system into the car chassis.
- Perform integration testing and troubleshoot as needed.

# Week 4: Final Testing and Documentation(Milestone 2)

- Conduct extensive testing on steering responsiveness and range.
- Optimize code and hardware setup based on test results.

- Prepare and compile project documentation, schematics, and code comments.
- Final review and project closure.