

Overall Project

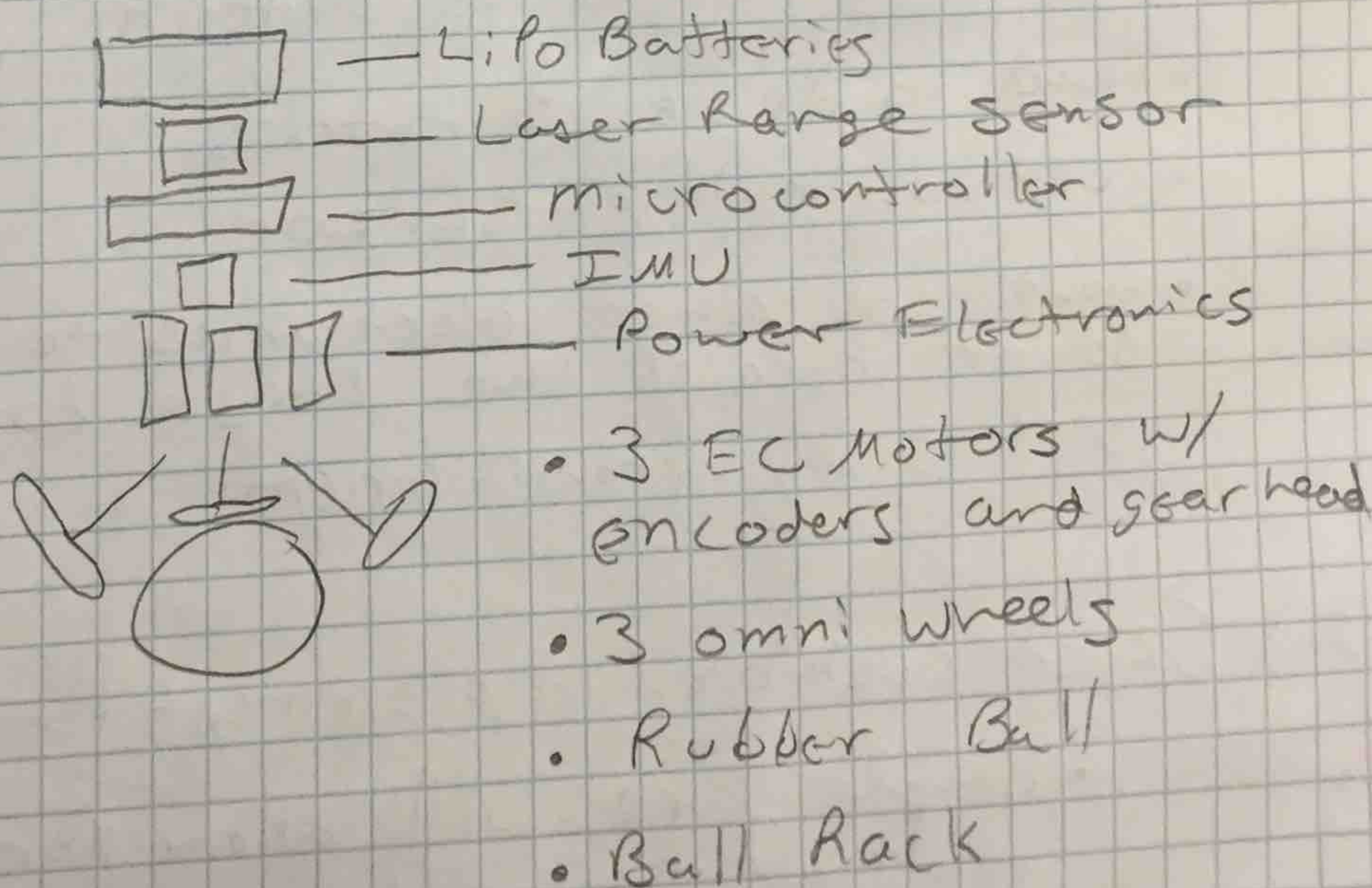
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1.) Why do the Project?

- Innovative movement
- personal bot
- Dynamic movement
- Control system / Stabilization

2. What exists? How is it Done?

- robot placed on top of ball
- three motors / wheels
- Rezero by Peter Fankhauser



3.) What your project brings

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- Innovative movement
- Balance
- Personal Bot
- Following Robot

Processor

1.) Beagle Bone

- 19 GPIO Pins
- Python
- low cost

2.) External components vs. Internal Capacities

- need to drive 3 motors
- control multiple sensor
- would need power electronics to supply power because the beagle bone can't supply enough current

3.) Speed cushion / improvement possibilities

- Beagle bone will allow for multiple sensor to help stabilize and control robot

4.) Cost Considerations

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- The Beagle Bone is a relatively cheap processor

- \$55

- makes it easier for mass production

Hardware

1.) Availability

- Sensors can easily be found on Adafruit

2.) Reliability

- I have worked with some of the distance sensor and found them to be reliable, AS for the gyroscope and accelerometers, I am not sure because I have no experience with them.

3.) Speed cushion . . .

- The sensors will give reliable feedback to help control the Stabilization of the Robot