Rover

VILNIUS UNIVERSITY, FACULTY OF MATHEMATICS AND INFORMATICS, INFORMATION TECHNOLOGIES STUDY PROGRAMME

Done by:

Nedas Janušauskas

Adomas Jonavičius

Aistė Grigalūnaitė

Gabrielius Drungilas

Supervisor: Linas Bukauskas

Outline

- Introduction of idea and vision
- Project requirements
- Technologies used
- Implementation plan
- Current status
- Possible issues

Introduction of idea and vision

Main capabilities:

- Sensing
- Movement
- Intelligence

Basic Rover structure:

- Raspberry pi
- 3D printed casing
- Various sensors and motors

Functional requirements

- Free movement
- Movement is decided without user input
- Obstacle detection
- Obstacle avoidance
- Sound signals

Non-functional requirements

- Robot will be operational until turned off
- Expected battery life – 2 hours
- Easy to operate

Hardware

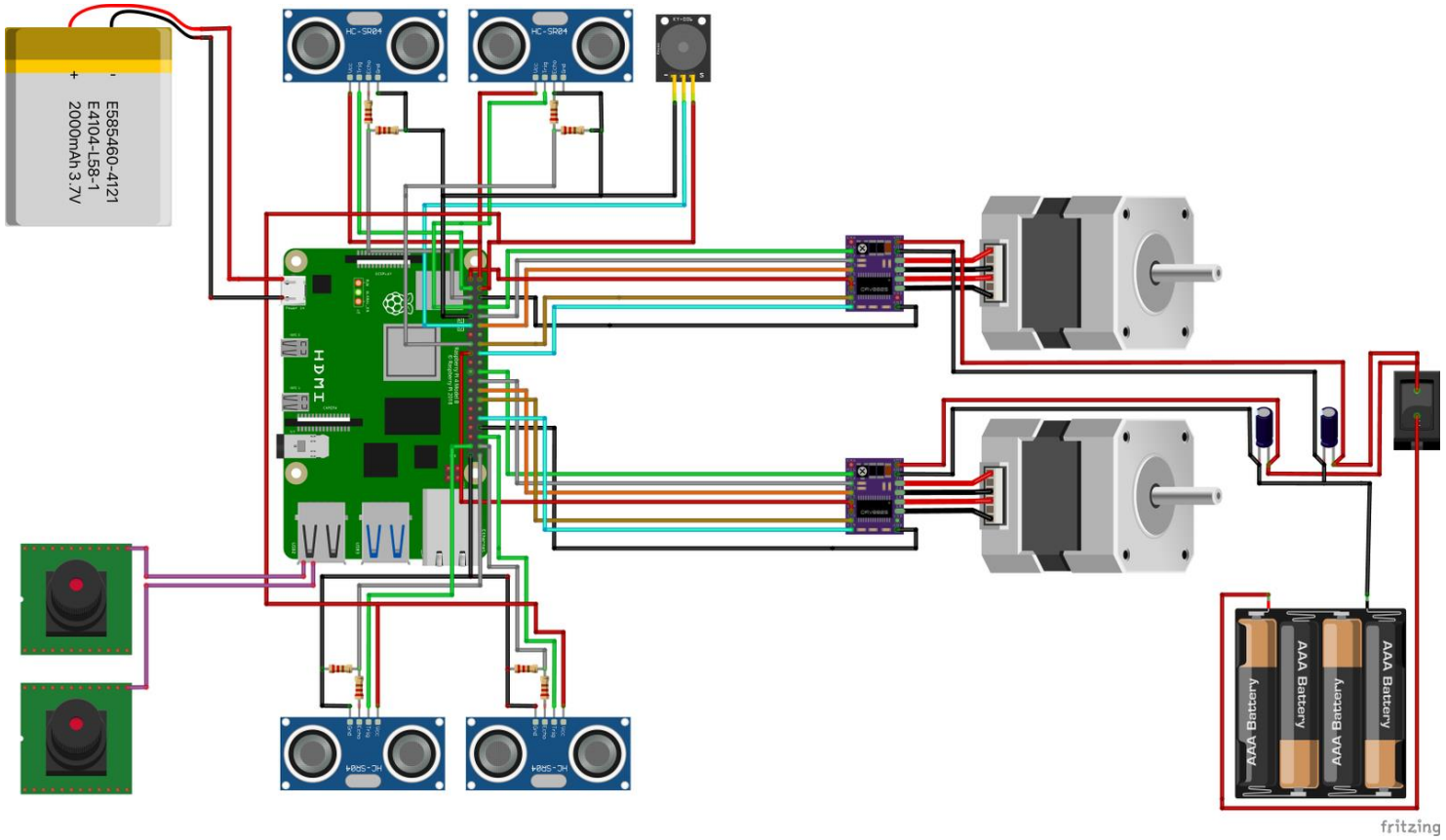

Figure 1: "Rover" hardware diagram.

Software

- Linux OS
- Python
- OpenCV
- BASH
- Git
- C++ (Possibly)

Accomplishments

- Planning
- Parts list
- Documentation
- Hardware diagram
- Testing of software

Current Status

- Waiting for hardware components to arrive
- Testing the software that is going to be used

Possible Issues

- Not getting the required hardware components on time to progress on the project
- Inefficient use of time due to lack of hardware components

THANK YOU FOR YOUR ATTENTION

QESTIONS?