Minutes of the Meeting of Group 5(1st)

Date: 26th June 2023

Time: 8:00 a.m. --- 11:00 a.m.

Duration: 3 hours

Present: Jintong Yang(leader), Haodong Shi, Xincheng Wang, Junda Song, Miao Tian

Minutes recorder: Haodong Shi

Absent: No absence

1. DISCUSSION OF THE PROJECT DEVELOPMENT

1.1 Project background and objectives

It is confirmed that the goal is for the assembled car to make it through the maze and find the treasure.

The main functions and features of the robotic car were identified, including remote control operation, autonomous navigation, and sensor data acquisition.

1.2 Division of labour and tasks

A specific division of labour and a timetable for tasks were established, with clear responsibilities and progress for each individual.

1.3 Technology implementation programme

Make sure what function we need:

1. ultrasonic sensor
2. infrared module
3. Camera
4. WIFI
5. Bluetooth
6. Color sensor
7. Collision sensor
8. Buzzer sensor

1.4 Progress

Defined the overall project schedule and milestone nodes to ensure timely completion of critical tasks.

Identified acceptance criteria and testing requirements for each phase to ensure project quality and reliability which includes:

2023/6/26 Assembly car and finish two sensors before 6.p.m

2023/6/28 Installation of all the sensor we need,and also write the code of each function.

2023/6/29 Test the function in maze,and optimize the function

2023/7/1 Debug and test the modules.

2. MEETING ARRANGEMENTS

2.1 Deliver tasks to each member of the group appropriately and set a deadline.

2.2 Assembled the car and finished code of ultrasonic sensor collision sensor and infrared transmitter module,then began to write code for basic running function.

Minutes of the Meeting of Group 5(2nd)

Date: 27th June 2023

Time: 8:00 a.m. --- 11:00 a.m.

Duration: 3 hours

Present: Jintong Yang(leader), Haodong Shi, Xincheng Wang, Junda Song, Miao Tian

Minutes recorder: Haodong Shi

Absent: No absence

1. DISCUSSION OF THE PROJECT DEVELOPMENT

1. Maze algorithms

Use right-hand rule to write labyrinth algorithm,and also use stack to store the path information so car will not record the same treasure and get out from maze successfully.

2. Colour recognition algorithms

The car stop once it recognizes different colors and we set special RGB to detect which is exactly the treasure.

3. Collision Module

Write code for the collision recognition module to ensure that the car can stop after colliding with an object.

2. MEETING ARRANGEMENTS

Code of the initial function of the car is written, the car overall installation is completed waiting for further debugging.

Minutes of the Meeting of Group 5(3rd)

Date: 28th June 2023

Time: 8:00 a.m. --- 11:00 a.m.

Duration: 3 hours

Present: Jintong Yang(leader), Haodong Shi, Xincheng Wang, Junda Song, Miao Tian

Minutes recorder: Haodong Shi

Absent: No absence

1. DISCUSSION OF THE PROJECT DEVELOPMENT

1.1 Buzzer Module Algorithm

It will ring loudly while car detect the treasure and stop.

1.2 Debug the various modules of the car

Debugging the code of each module to ensure that they can cooperate with each other to complete their respective functions, focusing on testing what wheel speed and ultrasonic recognition distance of the car is more suitable.

2. MEETING ARRANGEMENTS

Basically ensure that the car operates properly and debug the speed of the car going through the maze.

Minutes of the Meeting of Group 5(4th)

Date: 25th June 2023

Time: 13:00--- 16:00

Duration: 3 hours

Present: Zhili Li(leader), Jiayi Chen, Boyu Feng

YOLOv8 Download and Environment Setup

Team members download YOLOv8 and set up the necessary environment. This step is crucial to ensure smooth progress for the subsequent tasks.

Minutes of the Meeting of Group 5(5th)

Date: 27th June 2023

Time: 9:00 --- 11:00

Duration: 3 hours

Present: Zhili Li(leader), Jiayi Chen, Boyu Feng

Task Assignment for Image Annotation

Team members were responsible for annotating images of different categories such as Rubik's Cube, books, and keys using the YOLOv8 framework. Each member was given a specific task, ensuring that all categories of images were properly annotated.

Minutes of the Meeting of Group 5(6th)

Date: 29th June 2023

Time: 9:00 --- 11:00

Duration: 3 hours

Present: Zhili Li(leader), Jiayi Chen, Boyu Feng

Training on Annotated Images

After the images were annotated, used them as the training set. The

team carried out the training process to refine the model's performance.

Minutes of the Meeting of Group 5(7th)

Date: 15th Sept 2023

Time: 19:00 --- 22:00

Duration: 3 hours

Present: Zhili Li(leader), Jiayi Chen, Boyu Feng

GUI Development

Team members designed the GUI in draft together. Then team members learned some knowledge on making a GUI through python. At last, we distributed this task into 3 parts, and every team member responsible for one of them.

Minutes of the Meeting of Group 5(8th)

Date: 8th October 2023

Time: 10:00 a.m. --- 1:00 p.m.

Duration: 3 hours

Present: Jintong Yang(leader), Haodong Shi, Xincheng Wang, Junda Song, Miao Tian

Minutes recorder: Haodong Shi

Absent: No absence

3. DISCUSSION OF THE PROJECT DEVELOPMENT

1.1 Finish and optimize WIFI and Bluetooth,made sure that this two block and output data correctly and function well.

1.2 Debugging code with students from other disciplines

Camera was plugged into the object recognition algorithm of the IoT students, the data returned from the camera and information printed by Bluetooth was plugged into the database created by the e-commerce students.

4. MEETING ARRANGEMENTS

Successfully debugged the car, identified the corresponding treasure and returning the information maze to the database to create an electronic maze map while run through the maze .

Minutes of the Meeting of Group 5(9^{th})

Date: 27th June 2023

Time: 8:00 a.m. --- 11:00 a.m.

Duration: 3 hours

Present: Gao Jiaqi(leader), Huang Zixuan,Zhang Runzi

Minutes recorder:Zhang Runzi

Absent: No absence

3. DISCUSSION OF THE PROJECT DEVELOPMENT

3.1 Project background and objectives

Our task is to design a website (including front-end and back-end) in java and build a database that can be connected with it to display various information (including pictures taken, car tracks generated, real-time videos, etc.) during the treasure hunting process of the car.

3.2 Division of labour and tasks

A specific division of labour and a timetable for tasks were established, with clear responsibilities and progress for each individual.

3.3 Progress

Defined the overall project schedule and milestone nodes to ensure timely completion of critical tasks.

Identified acceptance criteria and testing requirements for each phase to ensure project quality and reliability which includes:

2023/6/26 Set up the back end of a website, sign in to change your password .Design and build database

2023/6/28 Write front-end code and beautify it

2023/6/29 Connect to websites and databases

Meeting records

2023/7/1 Debug and test the modules

Minutes of the Meeting of Group 5(10th)

Date: 5th October 2023

Time: 8:00 a.m. --- 11:00 a.m.

Duration: 3 hours

Present: Gao Jiaqi(leader), Huang Zixuan,Zhang Runzi

Minutes recorder:Huang Zixuan

Absent: No absence

1.DISCUSSION OF THE PROJECT DEVELOPMENT

1.1 Confirmed the project schedule, reviewed the content of the project during the interim acceptance, and determined the team tasks according to the requirements of the final acceptance, drawing the track and displaying, displaying photos and real-time videos, etc.

1.2 connecting the database with IoT students

1.3 use codes to draw the track by data from TEM students and display them

1.4 displaying photos and real-time videos from TEM students