C:\Users\mloughry\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\OG0115WC\CATME logo - Meeting Support - Web.tif **Team Minutes for Group 4 – Lightning McSEED**

|  |
| --- |
| **Team Members’ Names** |
| *Bailey Oteri* |
| *Jordie Weber* |
| *Trevor Wolf* |
| *Daxton Garner* |
| *Name* |
| *Name* |

GIT HUB: <https://github.com/Daxton-Garner/SEED-LAB>

**Meeting Agenda Template**

|  |  |
| --- | --- |
| **Meeting Date:**  ***Put date here*** | **Start Time: *Record time meeting started* End Time: *Record meeting end time***  **Summary of Meeting** |
| 1. Attendance | *Record members present (if absent, include reasons and whether teammates were notified in advance).* |
| 2. Purpose of Meeting |  |
| 3. Discuss work completed since last meeting. | *Team members report on what has been accomplished. Record notes of those reports here.* |
| 4. Summarize work completed during meeting | *Summarize discussion and work accomplished.* |
| 5. Review action items to be completed after meeting | *Who will do what by when?* |
| 6. Schedule next meeting | *Note time, place, and purpose.* |
| 7. Recording secretary | *Note who took the meeting minutes and the date that meeting minutes were circulated by e-mail.* |

**Meeting 1**

|  |  |
| --- | --- |
| **Meeting Date:**  ***9/20/2023*** | **Start Time: 1:13 pm End Time: *Record meeting end time***  **Summary of Meeting** |
| 1. Attendance | *All Present* |
| 2. Purpose of Meeting | *Complete team charter, divide tasks for mini project and plan work for it* |
| 3. Discuss work completed since last meeting. | *Bailey: Assignment 1 and 2 – Computer vision and Communications* |
| *Jordie: Assignment 1 and 2 – Computer vision and Communications* |
| *Trevor: Assignment 1 and 2 – Localization and control* |
| *Daxton: Assignment 1 and 2 - Localization and control* |
|  |
| 4. Summarize work completed during meeting | *Team Charter contract document completed and submitted. Planned work for mini project* |
| 5. Review action items to be completed after meeting | *Bailey: Start code for communication between Arduino and Pi* |
| *Jordie: Start code for scanning aruco markers with camera* |
| *Trevor: Start code for spinning wheels to correct angles given input signals – code implementation* |
| *Daxton: Start code for spinning wheels to correct angles given input signals – MATLAB/Simulink* |
|  |
| 6. Schedule next meeting | *9/20/2023 Noon, hoping to start coming to class an hour early so we have 2 hours three times a week to work on projects.* |
| 7. Recording secretary | *Bailey Oteri (boteri@mines.edu)* |

**Meeting 2**

|  |  |
| --- | --- |
| **Meeting Date:**  ***9/22/2023*** | **Start Time*: 1:00 pm* End Time: *1:10 pm* Summary of Meeting** |
| 1. Attendance | *Bailey, Jordie, Trevor (Daxton is sick)* |
| 2. Purpose of Meeting | *Determine progress and what work for mini project will look like workload wise for each member* |
| 3. Discuss work completed since last meeting. | *Bailey: Read mini-project documentation and gather code from last assignment to use* |
| *Jordie: Read through aruco documentation given and created new files for project* |
| *Trevor: Built hardware* |
| *Daxton: Unknown (sick)* |
| *Team member:* |
| 4. Summarize work completed during meeting | *Realized that this project is going to be more work for Trevor/Daxton so looked into ways Bailey/Jordie can assist with localization and control* |
| 5. Review action items to be completed after meeting | *Bailey: Unable to work between now and Monday* |
| *Jordie: calculations for marker position in camera frame* |
| *Trevor: Start control code* |
| *Daxton: Unknown (sick)* |
| *Team member:* |
| 6. Schedule next meeting | *Friday, 9/29/2023 at 1 pm* |
| 7. Recording secretary | *Bailiey Oteri (boteri@mines.edu)* |

**Meeting 3**

|  |  |
| --- | --- |
| **Meeting Date:**  ***9/29/2023*** | **Start Time: 1:00 pm End Time: 1:10 pm**  **Summary of Meeting** |
| 1. Attendance | *All Present* |
| 2. Purpose of Meeting | *Combining parts of mini project to hopefully have a working prototype by the end of the class period.* |
| 3. Discuss work completed since last meeting. | *Bailey: Code to have Arduino and Pi communicate.* |
| *Jordie: Code to aruco detection on Pi and output marker location on screen.* |
| *Trevor: Implemented PI control and started tuning for motor and finished hardware building.* |
| *Daxton: MATLAB, Simulink, and motor control development.* |
| *Team member:* |
| 4. Summarize work completed during meeting | *Combine everyone’s code and test system. Jordie created Readme() file in Gethub. Bailey, Trevor, and Daxton troubleshooting and tuning project.* |
| 5. Review action items to be completed after meeting | *Bailey: Fix Arduino and Pi comms.* |
| *Jordie: Speed up camera frame rate.* |
| *Trevor: Add relevant info to Readme() file and help fix Arduino and Pi comms.* |
| *Daxton: Add relevant info to Readme() file.* |
| *Team member:* |
| 6. Schedule next meeting | *October 6, 2023 at 1 pm unless determined needed sooner for starting next assignment* |
| 7. Recording secretary | *Bailey Oteri (boteri@mines.edu)* |

**Meeting 4**

|  |  |
| --- | --- |
| **Meeting Date:**  ***10/06/2023*** | **Start Time: 12:57 pm End Time: *Record meeting end time***  **Summary of Meeting** |
| 1. Attendance | *Jordie and Bailey (Daxton sick, Trevor on vacation)* |
| 2. Purpose of Meeting | *Planning Demo 1, Reflect on Mini project* |
| 3. Discuss work completed since last meeting. | *Bailey: None – was sick* |
| *Jordie: Studied for Demo 1, generated 5cmx5cm markers* |
| *Trevor: Started building new setup* |
| *Daxton: Started new Simulink control system* |
| *Team member:* |
| 4. Summarize work completed during meeting | *Tentative schedule created for demo 1*  *Officially due Oct 23, Plan to demo on Oct 20, no class on Oct 16 due to fall break. Therefore, first full attempt everything combined on Oct 13th.* |
| 5. Review action items to be completed after meeting | *Bailey: Code for PI for Demo 1, figure out why Arduino was not communicating with the PI last week possibly* |
| *Jordie: Code for PI for Demo 1* |
| *Trevor: C++ for Demo 1* |
| *Daxton: MATLAB/Simulink for Demo 1* |
| *Team member:* |
| 6. Schedule next meeting | *10/13/2023 1 pm* |
| 7. Recording secretary | *Bailey Oteri boteri@mines.edu* |

**Meeting 5**

|  |  |
| --- | --- |
| **Meeting Date:**  ***10/11/2023*** | **Start Time: 1:41 pm End Time: 1:50 pm**  **Summary of Meeting** |
| 1. Attendance | *All members present* |
| 2. Purpose of Meeting | *Weekly meeting, working on Demo 1 and presentation slides* |
| 3. Discuss work completed since last meeting. | *Bailey: Helped with Python code for PI for Demo 1, crated slideshow for presentation*  *Jordie: Leading on Python code for PI for Demo 1, math necessary to find angle between camera and marker*  *Trevor: Implemented PI controller for each wheel and wrote rotation code.*  *Daxton: wrote straight line code for Arduino, tuning and debugging robot movement* |
| 4. Summarize work completed during meeting | *PID tuning, presentation work, mathematic computing for PI* |
| 5. Review action items to be completed after meeting | *Fall break, no work expected from team until next meeting on Oct 18.* |
| 6. Schedule next meeting | *October 20, 2023 Noon* |
| 7. Recording secretary | *Bailey Oteri, boteri@mines.edu* |

**Meeting 6**

|  |  |
| --- | --- |
| **Meeting Date:**  ***10/20/2023*** | **Start Time: *1:00 pm* End Time: *1:05 pm***  **Summary of Meeting** |
| 1. Attendance | *All present* |
| 2. Purpose of Meeting | *Demo 1 – due Monday, hoping to finish it up today* |
| 3. Discuss work completed since last meeting. | *Bailey: Completed presentation and script for presentation*  *Jordie: Completed calculations and coding for PI for Demo 1*  *Trevor: Attempt to implement derivative controller*  *Daxton: Attempted to balance wheel speed via encoder* |
| 4. Summarize work completed during meeting | *Bailey: Record each member speaking their parts of presentation*  *Jordie: Test PI*  *Trevor: Debugging*  *Daxton: Debugging* |
| 5. Review action items to be completed after meeting | *HOPEFULLY Demo 1 will be ready by the end of this class, so that we will not have to work over the weekend and can demo on Monday. Then we will start planning for Demo 2 next week.* |
| 6. Schedule next meeting | *Next Friday October 27, 1 pm.* |
| 7. Recording secretary | *Bailey Oteri boteri@mines.edu* |

**Meeting 7**

|  |  |
| --- | --- |
| **Meeting Date:**  ***10/25/2023*** | **Start Time: *1:00 pm* End Time: *1:05 pm***  **Summary of Meeting** |
| 1. Attendance | *Bailey, Trevor, Jordie Present (Daxton out of town)* |
| 2. Purpose of Meeting | *Start looking at what needs to be done for Demo 2 (Demo Nov 8)* |
| 3. Discuss work completed since last meeting. | *Demonstrated Demo 1, Created a video of demonstrations and submitted it, all did individual parts of demo 1.* |
| 4. Summarize work completed during meeting | *Reviewed Demo 2, Team minutes need to be uploaded as Demo 2 documentation* |
| 5. Review action items to be completed after meeting | *Bailey: Get Arduino and PI to communicate values and quickly*  *Jordie: Determine how PI will find ArUco marker, and know when it is withing a foot of it*  *Trevor: Build robot ready for demo 2 and final demo, get robot to be able to stop when given external signal*  *Daxton: N/A* |
| 6. Schedule next meeting | *Next Friday November 3, 1 pm.* |
| 7. Recording secretary | *Bailey Oteri boteri@mines.edu* |

A diagram of a team

Description automatically generated

**~ State machine using for Demo 2~**

**Meeting 8**

|  |  |
| --- | --- |
| **Meeting Date:**  ***11/3/2023*** | **Start Time: *1:00 pm* End Time: *1:05 pm***  **Summary of Meeting** |
| 1. Attendance | *All Present* |
| 2. Purpose of Meeting | *Demo 2 due next week* |
| 3. Discuss work completed since last meeting. | *Bailey: Made State machine, made pseudocode to apply to this demo for I2C communications*  *Jordie: Made code on PI for this demo.*  *Trevor: Created physical robot.*  *Daxton: Made code for Arduino with state machine* |
| 4. Summarize work completed during meeting | *Finished building robot, Worked on code for PI and code for Arduino and I2C communications between them.* |
| 5. Review action items to be completed after meeting | *Next meeting is after Demo 2 so we will start planning for final Demo!*  *We have a lot to do before the next meeting, Jordie has to finish her code on the PI, Trevor and Dax have to finish their code for the Arduino, then Bailey has to combine the two and make sure the pseudocode for I2C can be applied and things are working. We then have to debug and test the robot as a whole.* |
| 6. Schedule next meeting | *Next Friday November 10, 1 pm.* |
| 7. Recording secretary | *Bailey Oteri boteri@mines.edu* |

|  |  |
| --- | --- |
| **Meeting Date:**  **11/10/23** | **Start Time: 1:35 pm End Time: 1:45 pm**  **Summary of Meeting** |
| 1. Attendance | *Daxton absent* |
| 2. Purpose of Meeting | *Preliminary plan for Final demo* |
| 3. Discuss work completed since last meeting. | *Demo 2, paperwork for demo 2* |
| 4. Summarize work completed during meeting | *For final demo we found out we can do demo 2, however decided we want to do the final demo.*  *For Final demo: want to bulk state machine, rethink some tracking control, do more runs before demo then demo 2, edit physical design a bit (shift weight), make transition between each marker (make loop to keep track of marker numbers and stop at 6, speed up a bit (implement stop, move, stop, move)* |
| 5. Review action items to be completed after meeting | *Plan for final demo* |
| 6. Schedule next meeting | *11/17/23 at 1 pm* |
| 7. Recording secretary | *Bailey Oteri, (boteri@mines.edu)* |

|  |  |
| --- | --- |
| **Meeting Date:**  **11/13/23** | **Start Time: 1:50 PM End Time: *2 PM***  **Summary of Meeting** |
| 1. Attendance | *All present* |
| 2. Purpose of Meeting | *Discuss if we have enough time to do final demo well.* |
| 3. Discuss work completed since last meeting. | *We looked at the calendar and realized we only have 5 work days before the final demo and were discussing how we would make the robot do the final demo. It is a lot more complicated then we initially thought and we had a bit of a panic about it. We looked at the option to do Demo 2 again and what our grade would be if we we chose that option and realized that we could get a D on the final demo and still get an A.*  *We decided that at this point is it more worth it for us and how busy we are to chose this option. We are hoping to have it completed by Friday, and spend the rest of the classes trying to see if the final demo would be possible.* |
| 4. Summarize work completed during meeting | *Decided to do Demo 2 again for the final demo* |
| 5. Review action items to be completed after meeting | *We will take our observaitons from Demo 2 to improve our code, algorithm, and physical design in the following week.* |
| 6. Schedule next meeting | *Friday, 11/27/23* |
| 7. Recording secretary | *Bailey Oteri boter@mines.edu* |

|  |  |
| --- | --- |
| **Meeting Date:**  **11/27/23** | **Start Time: 1:50 PM End Time: *2 PM***  **Summary of Meeting** |
| 1. Attendance | *Daxton Absent* |
| 2. Purpose of Meeting | *Final meeting to discuss work to do and timeline for that work* |
| 3. Discuss work completed since last meeting. | *None - Thanksgiving Break* |
| 4. Summarize work completed during meeting | *Agreed that we will demonstrate demo 2 for the final demo. Goal is to have all work for course and demo done on Friday December 01, 2023. Jordie is working on documentation in the GitHub and ReadMe, Bailey is adjusting presentation for Demo 2 objectives, Trevor is adding technical details to presentation.* |
| 5. Review action items to be completed after meeting | *1.) Finish PowerPoint, Create presentation script, record presentation, submit to Canvas*  *2.) Finish GitHub organization and documentation, submit to Canvas.*  *3.) Group Equipment return*  *Individual to do:*   1. *Final Demo Effort Weighting (Canvas)* |
| 6. Schedule next meeting | *Unknown if another meeting will take place* |
| 7. Recording secretary | *Bailey Oteri boter@mines.edu* |