Milestones, Timeline, and Effort Matrix

The Medicine Delivery Robot

Brock Stechschulte, Anthony Dietz, and Kevin Blount

Thesis Advisor: Janet Dong

Milestones List:

1. **10/21/19 Acquire Parts:** Have all parts purchased and delivered to us. Also begin to work on drive train design.
2. **12/1/19 CAD Design:** Finalized computer-aided design for drive train section and begin work on programming.
3. **12/21/19 Web Application:** Web application UI is complete. And we are able to access the website.
4. **2/1/20 Robot Movement:** Working drive train, begin work on storage compartment. Will be able to drive around, position the robot in a room, and detect obstacles.
5. **3/1/20 Robot Storage:**  Finished storage compartment and working camera.
6. **3/23/20 Finished Medicine Delivery Robot:** From here on out, time will be focused on debugging small issues and preparing for tech expo.
7. **4/9/20 – Tech Expo Presentation:** Present our medicine delivery robot at the tech expo. Show that our robot is able to successfully deliver medicine to a patient.

Task List:

1. Research sensors to incorporate on robot (Kevin)
2. Research robot design (Anthony)
3. Investigate possible design concepts (Anthony)
4. Finalize design concept (Anthony)
5. [Milestone 1] Obtain robot parts to begin working on drive (Kevin)
6. [Milestone 2] Finalized CAD design for drive train (Anthony)
7. Research development design of robot (Brock)
8. [Milestone 3] Complete web application (Brock)
9. Develop code for robot's drive train (Brock)
10. Design storage compartment (Kevin)
11. [Milestone 4] Complete Robot Movement (Anthony)
12. [Milestone 5] Complete work on storage compartment (Kevin)
13. Develop code to open/close storage compartment (Brock)
14. Implement sensors and camera (Kevin)
15. Validate development is complete (Anthony)
16. [Milestone 6] Validate robot functionality is complete (Brock)
17. Refine and test robot (Brock)
18. [Milestone 7] Tech Expo Presentation (All)

Timeline and Effort Matrix:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Task ID | Start | Finish | Primary | Kevin’s Effort | Anthony’s Effort | Brock’s Effort | Progress |
| 1 | 09/15/19 | 10/12/19 | Kevin | 90% | 10% | 0% | 100% |
| 2 | 09/15/19 | 10/02/19 | Anthony | 50% | 50% | 0% | 100% |
| 3 | 09/28/19 | 10/08/19 | Anthony | 60% | 40% | 0% | 100% |
| 4 | 10/15/19 | 11/01/19 | Anthony | 70% | 30% | 0% | 75% |
| 5 | 10/16/19 | 10/21/19 | Kevin | 40% | 40% | 20% | 0% |
| 6 | 11/01/19 | 12/01/19 | Anthony | 75% | 25% | 0% | 0% |
| 7 | 11/01/19 | 12/01/19 | Brock | 0% | 0% | 100% | 0% |
| 8 | 12/01/19 | 12/30/19 | Brock | 0% | 0% | 100% | 0% |
| 9 | 01/09/20 | 02/01/20 | Brock | 0% | 0% | 100% | 0% |
| 10 | 01/15/20 | 02/12/20 | Kevin | 90% | 10% | 0% | 0% |
| 11 | 01/16/20 | 02/01/20 | Anthony | 0% | 100% | 0% | 0% |
| 12 | 02/13/20 | 03/01/20 | Kevin | 80% | 20% | 0% | 0% |
| 13 | 03/01/20 | 03/23/20 | Brock | 0% | 0% | 100% | 0% |
| 14 | 03/04/20 | 03/15/20 | Kevin | 50% | 40% | 10% | 0% |
| 15 | 03/20/20 | 03/24/20 | Anthony | 20% | 80% | 0% | 0% |
| 16 | 03/20/20 | 04/01/20 | Brock | 0% | 0% | 100% | 0% |
| 17 | 04/01/20 | 04/08/20 | Brock | 33% | 33% | 34% | 0% |
| 18 | 04/09/20 | 04/09/20 | All | 33% | 33% | 33% | 0% |