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| Progress Report | | | | | | | |
| Week 1 | | | 5/18/2025 |  | |  | |
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| Group Members | | Jeffery Wheeler | | | | | |
| Joshua Tilson | | | | | |
| Sean Copple | | | | | |
| Valentin Wolf | | | | | |
| Project Title | | The Smart Bird Feeder | | | | | |
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| Task: Mechanical Prototype Assembly | | | | | | | |
| Task Status: In Progress | | | 80% Completed: | | | Jeffery Wheeler | |
| Task Details |  | | | | | | |
| Completed full 3D print of version 1 feeder housing. All parts were assembled to test physical fit of electrical components. Next step is to perform functional testing with electronics installed. | | | | | | | |
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| Conclusions |  | | | | | | |
| All mechanical parts fit correctly, and layout is confirmed. Further testing is required to check motion, access, and cable routing before finalizing version 2 design. | | | | | | | |
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| Action items | | | | | Person responsible | | Deadline |
| Begin full system testing inside housing | | | | | Jeffery Wheeler | | 6/01/2025 |
| Prepare feedback on version 1 for version 2 improvements | | | | | Jeffery Wheeler | | 6/01/2025 |
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| Task: Component Integration Testing | | | | | | | |
| Task Status: In Progress | | | 60% Completed: | | | Joshua Tilson | |
| Task Details |  | | | | | | |
| All sensors and motor components were connected on a test bench. Ongoing tests are running to confirm proper integration between power supply, load cell, servo, and sensors. | | | | | | | |
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| Conclusions |  | | | | | | |
| Initial integration looks good. Power and sensor response are stable. Some minor adjustments to wiring and code structure are expected as testing continues. | | | | | | | |
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| Action items | | | | | Person responsible | | Deadline |
| Finish component testing with all sensors active | | | | | Joshua Tilson | | 6/01/2025 |
| Log any errors or unexpected behaviors during tests | | | | | Joshua Tilson | | 6/01/2025 |
| Task: Sensor Fault Detection Code | | | | | | | |
| Task Status: In Progress | | | 20% Completed: | | | Valentin Wolf | |
| Task Details | Construction of prototype version 1 | | | | | | |
| Code is being written to detect faulty sensor conditions. For example, photoresistors or IR sensors that do not change state when expected (e.g., stuck high or low). | | | | | | | |
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| Conclusions |  | | | | | | |
| Basic structure for fault detection is in progress. More cases and triggers will be added after additional testing and input from component integration. | | | | | | | |
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| Action items | | | | | Person responsible | | Deadline |
| Add logic to handle sensor timeout or stuck states | | | | | Valentin Wolf | | 6/01/2025 |
| Test error handling responses in Wokwi or on real hardware | | | | | Valentin Wolf | | 6/01/2025 |
| Task: GitHub Code & File Sharing Setup | | | | | | | |
| Task Status: In Progress | | | 80% Completed: | | | Sean Copple | |
| Task Details |  | | | | | | |
| Created a new shared GitHub repository to improve team collaboration. Includes release notes, shared code access, and expanded storage for print files. | | | | | | | |
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| Conclusions |  | | | | | | |
| The new system allows real-time updates and easier code review. It also supports file versioning and notes to reduce confusion and track changes. | | | | | | | |
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| Action items | | | | | Person responsible | | Deadline |
| Share login and usage instructions with team | | | | | Sean Copple | | 5/31/2025 |
| Use GitHub for all future code versions and STL file uploads | | | | | Sean Copple | | 5/31/2025 |
| Task | | | | | | | |
| Task Status: Choose an Item | | | % Completed: | | |  | |
| Task Details |  | | | | | | |
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| Conclusions |  | | | | | | |
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| Action items | | | | | Person responsible | | Deadline |