

View results

Respondent

31 Abby Gillham

43:33

Time to complete

1. Date of this semester progress report submission *

5/15/2025

2. Name of project exactly as it was listed in your award letter *

Illini EV Concept EV3

3. Date of original award letter *

November 20th, 2024

4. Date of expiration listed on award letter (or on scope change approval if more recent) *

November 20th, 2026

5. What is your project's 6 digit fund account number created for this project and to which the SSC allocation was transferred?

Please ask your project's financial contact for this information if unknown.

6. How much was your award (i.e., original award plus any approved budget increases)? *

\$59,935.97

7. How much of your award has been spent to date (in dollars)? *

\$2387.01

8. Date of forecasted project completion *

May 13, 2026

9. Have you submitted one or more semester progress reports previously? *

☐ YES

☒ NO

10. Describe, in detail, what has been completed on the project since the last semester progress report (or since the project commenced if you have not yet submitted a semester progress report)? *

Since the project commencement, we have had several advances in our mechanical and electrical/embedded teams. Our completions are as follows:

Mechanical:

- Broken car wheels repaired
- Car steering alignment modified to improve efficiency
- New seat and seatbelt installed in car to improve driver comfort and safety
- Designed body of new car

Electrical:

The electrical team this year worked on several projects of which most of them got to the testing/soldering/working extent. Our projects included a custom power converter, new BLDC motor controller, new taillights of the car, audio module, battery charger, new Li-ion battery and FPGA RISC-V CPU.

Several of our projects this year were fully experimental (aimed to implement in EV3) so they were not completed in this semester, but the progress has been great and we are hoping several projects get finished by next year such as the battery charger and RISC-V CPU.

11. Describe, in detail, the project's challenges/obstacles since your last semester progress report (or since the project commenced if you have not yet submitted a semester progress report)? *

Below are the challenges our mechanical and electrical/embedded teams faced:

Mechanical:

- Team member attendance dropped throughout semester
- Lack of composites experience continues to make design and manufacturing planning difficult

Electrical:

One of the main challenges the team faced was the motor controller. Since last year several of our senior members graduated, important technical knowledge was not passed on correctly and the team struggled to be able to control and get the previous motor controllers created by the previous president to work. However, due to this we created a new motor controller from scratch with a team of mainly sophomores, serving as great practical experience that led them to their internships this Summer and Fall at SpaceX. This shows the value being in our team and working on projects may have to the future of students due to the technical skills one can acquire.

12. Describe, in detail, the project's successes since your last semester progress report (or since the project commenced if you have not yet submitted a semester progress report)? *

Below are the successes our mechanical and electrical/embedded teams faced:

Mechanical:

- Team passed technical inspection at competition
- Design reviews completed for all mechanical project teams - next steps clearly outlined and design work should be complete by the end of the summer

Electrical:

Our greatest success by far is winning the second place Carbon Footprint Reduction Award due to our Custom GaN Power Converter Project. This achievement shows that our efforts to work on complex, experimental projects that require extensive research and testing can be recognized externally. Another important achievement this year involves retention of members. This year we have almost all Project Leads stay, which each project team have 1-2 people each. Usually we get several people dropping out due to academics, but this semester we've gained a solid leadership and membership crew. We also passed technical inspection during competition, showcasing our engineering progress with all systems of the car, especially low voltage such as lights, dashboard, brake and accelerator control.

13. Did your project have any changes to its team that SSC should know about (e.g., project lead, faculty/staff advisor, departmental financial contact)? *

NOTE: If yes, please complete the SSC Project Contact Information Change Form located at this link: <https://forms.office.com/r/uBjx9nmNpG>

☐ YES

☒ NO

14. Complete and upload the semester financial documentation for your project. You should reflect all expenditures since your last semester project report. **We strongly suggest that you also upload supporting financial transaction reports from Banner for your award CFOP. Talk to your project's financial advisor for more information on generating this report.**
<https://studentengagement.illinois.edu/sites/default/files/2024-09/SSC-Budget-Timeline-SEMESTER-PROGRESS-REPORT-template.xlsx>

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NOTE: When your project is completed and/or expired (whichever comes first), any remaining project funds will be transferred back to the SSC.

 [SSC-Budget-Timeline-SEMESTER-PROGRESS-REPORT- Abby Gillham.xlsx](#)

15. (OPTIONAL FOR SEMESTER REPORT) Upload project marketing and/or media not previously submitted in semester progress reports.

NOTE: Project marketing and/or media must include SSC's logo and/or a statement of which fee(s) funded the project.