**CU Senior Design Performance Evaluation Template**

Employee:      Cole Radetich

Reviewer:      Dr. Xiao

Review Period (Fall or Spring):      Spring

**Review Period Overall Performance Score**

This score represents overall performance of the team member. While it should generally represent an average score from the Core Competency categories, it may deviate due to exceptional performance in a smaller number of areas. Similarly, this number does not necessarily correspond to the assigned grade in the course.

Employee-assigned Score:    4   (1 – 5, with 5 being the highest)

Reviewer-assigned Score:       (1 – 5, with 5 being the highest)

**Core Competencies**

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| *Exceptional:* Performance consistently exceeds expectations. | *Exceptional (5)* | *Highly Effective (4)* | *Proficient (3)* | *Inconsistent (2)* | *Unsatisfactory (1)* |
| *Highly Effective:* Performance frequently exceeds expectations. |
| *Proficient:* Performance consistently meets expectations. |
| *Inconsistent:* Performance meets some, but not all expectations. |
| *Unsatisfactory:* Performance consistently fails to meet minimum expectations, team member fails to utilize necessary skills. |
| 1. **Accountability:** Takes on equitable responsibilities and tasks, and appropriately manages time to complete assigned task   *Employee Comments*: My time management greatly improved since last semester but could still be much better. I’ve gotten a little better about asking for help but I could also ask for more help.  *Reviewer Comments*: |  |  | E |  |  |
| 1. **Technical Proficiency:** Pursues a technical role on team and demonstrates technical proficiency within role   *Employee Comments*:  This capstone has taught me so much about firmware, serial communication, and lots of topics. I’ve gone to great lengths to make sure I know these topics so I can (and still am) debugging all aspects of the device.  *Reviewer Comments*: | E |  |  |  |  |
| 1. **Active Participation:** Engages during director/client meetings (clearly conveys personal contributions to project, provides constructive feedback, and consistently expects quality)   *Employee Comments*:  I feel as though I am always paying attention and try to put in my input wherever I think it works.  *Reviewer Comments*: |  | E |  |  |  |
| 1. **Interpersonal Skills:** Interacts effectively with others to establish and maintain smooth working relationships   *Employee Comments*:  I have become close with nearly everyone on our team and feel as though we all knew exactly how to behave in order to keep good team chemistry and energy. May have been a little too jovial at times but I think overall this helped us.  *Reviewer Comments*: | E |  |  |  |  |
| 1. **Resource Utilization:** Uses CU and team resources effectively and under appropriate circumstances   *Employee Comments*:  I do use our labs and such lots but I could be better about asking for help, as mentioned before. I take a little too much on sometimes when we have other CS guys who know what’s going on.  *Reviewer Comments*: |  |  | E |  |  |
| 1. **Professionalism:** Exhibits professionalism and effective communication   *Employee Comments*:  I think in all of the communications we had with our director, along with a judge shoutout at expo for our professionalism and technical communication, I did a good job communicating effectively and professionally.  *Reviewer Comments*: |  | E |  |  |  |
| 1. **Technical Communication:** Effectively communicates technical information in both oral and written forms   *Employee Comments*:  As said above, we were called out for having great technical communication and professionalism and I think I and everyone on my team did a great job communicating.  *Reviewer Comments*: | E |  |  |  |  |

**Performance Summary (to be completed by employee)**

What did you do this semester? (please put together a list of tasks that you directly contributed towards, your specific responsibilities, and what skills you utilized)

I programmed the code for our test bench and helped validate our codeflow and early circuit prototypes.

I helped create and soldier the circuit boards with Miles and Palmer, offering advice whenever I could

I helped test (as the systems engineer) and was at nearly every testing session this semester, helping out as I could

Helped make poster, multiple times, and helped myself and people write speeches for presentations

Helped make other decorations for expo, helping with setup and teardown

Helped debug electrical issues in order to move onto full code flow tests

Still currently working out final bugs, going tonight and tomorrow to test more and try to iron out final bugs.

What did you learn this semester? (make a list of the technical and non-technical items that you learned over the semester, being very specific about the learning outcomes. E.g. “learned how to perform XYZ specific hand calculation when looking at XYZ” is better than “learned how to do hand calculations”).

How to make a full scale prototype, Engineering communication, how to make a presentation poster, how to sell a prototype both to judges and professionals in the field of concern, Debugging C++ and Python and BASH scripting, UART debugging and serial communication nuances, PWM and the electrical engineering concepts behind PWM and PWM detection. Voltage regulation and how to smooth power with simple circuits, I got to watch and learn a lot about test engineering roles aswell.

What are 1-2 things you didn’t complete or succeed at? What happened, and what could you have done better to improve performance/outcomes? How did this impact others and the trajectory of your project?

One big thing is that the code still currently has a bug where it is not collecting as much data as we need it to. I know its the code and I have some ideas of how to replicate and fix it, but its been stumping me for months and could make our sensor have less time for data collection. I think if I had done some different types of early testing I could have seen this earlier but I also think there’s a good chance it will be fixed before we turn the device over to Maddie Thursday.

**Personal Goals (evaluated by both Employee and Director)**

Please evaluate the team member on their personal goals for the Senior Design project.

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| **Goal #1: Role-Specific Goal** |
| Goal Description: I hope to find better ways to interface with raw signals through GPIO on SBC computers. With this, I hope to give Ball and whoever accesses this technology a good, upgradeable, module-based system for controlling our sensor. My hopes are that this system is easily changed and  upgraded, along with easily understood, by any competent user. |
| Goal Metrics:  Ability for any engineer to use and change the system easily once complete. |
| Interim Goal Progress (November/December):  So far, all has been written in Python--this makes our software modular and easy to read and digest.  So far so good! |
| Goal Results (April):  Our device turned out very powerful and easily edited by simple Python scripting on a Linux computer. Other than a small bug all of the GPIO and Serial communication works and I am super excited to have these new skills. |
| **Goal #2: Individual Goal** |
| Goal Description:  I hope this project allows me to find better habits when working with a team—I tend to find  myself taking on extra work and being less of a team player. I will be putting this habit aside for this  project though and spending my effort trying to work as smoothly as I can in a team-  player way. |
| Goal Metrics:  Find out specifically each day/week/month what I am needed for, and execute  these tasks. |
| Interim Goal Progress (November/December):  I have been very focused on my own task but also finding ways to be helpful with things I’m less  involved with. I think this is going very well. |
| Goal Results (April):  Our team got along super well and won two awards at expo, and I think towards the end we all became perfect team players and started to work like a unit. I think I’ve picked up good teamwork skills over this project. |
| **Goal #3: Teamwork Goal** |
| Goal Description:  In slight contrast to my last statement, I hope to find myself taking on lots of work for the  team in a productive way—I want to prove that I can not only carry my weight as a computer  scientist but also find myself being helpful in other areas of the project (optics, electronics,  etc). |
| Goal Metrics:  Find out extra tasks each day/week/month what I am needed for, and execute  these tasks. |
| Interim Goal Progress (November/December):  Again, I have been very focused on my own task but also finding ways to be helpful with things I’m  less involved with. Working with the electronics team and manufacturing team on overlap has  facilitated a lot of this. |
| Goal Results (April):  From working test engineering to soldiering and helping with circuit diagrams, I think I’ve been able to find lots of things I can help with that completely change and expand my skillset. I am particularly proud of my progress in this department. |
| **Goal #4: Technical Goal** |
| Goal Description:  I, through this project, would like to master my \*nix (Linux or Unix) low-level system  processing. For example, at the end of this project I would like to be able to take any POSIX  computer and program it to interface in a low-level manner with its serial or GPIO interface. |
| Goal Metrics:  Ability to interface with low-level communication ports of POSIX computers. |
| Interim Goal Progress (November/December):  I am getting very good at writing both kernal modules and system services through practice I’ve been doing for this project. This is encouraging and already showing in my ability to write code. |
| Goal Results (April):  Super proud of my skills in this area. I think I ended up learning most of it in December through February but I actually got my job offer basically because of my ability to communicate well about these exact concepts. I know now that I can do it aswell. |