EE/CprE/SE 491 WEEKLY REPORT 02

09/19/2024 – 09/26/2024

Group number: 9

Project title: Space Cyclones - COSMIC CAPSTONE CHALLENGE 2024-2025

Client &/Advisor: Bo Varga, Benjamin Rupp, Rachel Shannon

Team Members/Role: John Beuter (Team Lead), Daniel Sprout, Maheeka Davarakonda, Tanvi Mehetre, Riley Heeren, Ben Swegle

- **Weekly Summary**

Week Objectives: Continue research and generate 1-2 ideas.

- **Past week's accomplishments** *(Please describe/summarize what was done, by whom, when, and collectively as a group. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project-related results are acceptable, but please ensure that they are legible (clear enough to read) and explain. If researching a topic, please add details about what was learned and how it is relevant to the project. If two or more people worked on a single task, distinguish how each member contributed. Specific details relating to the assistance provided to other members may be included here.* ***Do not include classwork, such as individual reflection assignments and group meetings as part of your duties.)***

• John Beuter:

Looked into ISAM state of play documentation from Ben. Researched robotics in space with an emphasis on Robonaut2, which NASA is currently using. Sketch noted two design ideas.

• Daniel Sprout: Brainstorming different design ideas, and identifying space specific concerns such as the impact and scale of distance and the impact/differences of a 0g environment

• Maheeka Davarakonda:

Continued Research on lasers in space. Continued reading book

• Tanvi Mehetre:

Read some research papers based on ISAM that talk about the ongoing implementations and future plans concerning ISAM.

• Riley Heeren:

- Brian strom different design ideas. Create a sketch note of the project to explain to the group. Research similar solutions that are already being worked on in the industry.

• Ben Swegle:

- Researched ISAM, and ISAM programs, and looked through the “ISAM State of Play 2023” report detailing ISAM projects and industry participants.
- Sketchnoted project ideas

- **<u>Pending issues</u>** *(If applicable: Were there any unexpected complications? Please elaborate.)*
    - John Beuter: N/A
    - Daniel Sprout: N/A
    - Maheeka Devarakonda: N/A
    - Tanvi Mehetre: N/A
    - Riley Heeren: N/A
    - Ben Swegle: N/A

- **Individual contributions** *(Creating this section is optional, but it is **Required to include the "Hours Worked for the Week" and their "Total Cumulative Hours" for the project for each member somewhere relevant in your report. Your weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that individual contributions support your claim to the weekly hours. Be honest with the reports.**)*

NAME	**Individual Contributions** *(Quick list of contributions. This should be short.)*	**Hours this week**	**HOURS cumulative**
John Beuter	Conducted research on robotics and space and what has been done in the past. Created sketch notes based on research.	1.5	2.5
Daniel Sprout	Sketchnoting and ISAM research: specifically challenges of 0g design and the scale of space.	2	4
Maheeka Davarakonda	Continued Research and reading book	1	7
Tanvi Mehetre	Reading research papers and creating sketch notes.	2	2
Riley Heeren	ISAM research and sketch noting design ideas	1	2
Ben Swegle	Researched ISAM ideas and created sketch-noted project ideas	2	3

- **Comments and extended discussion** *(Optional)*
  Feel free to discuss non-technical issues related to your project.
- **Plans for the upcoming week**

Prepare 3 sketch notes per person by next Thursday and be prepared to send designs to Bo.

- **Summary of weekly advisor meeting** (*If applicable/optional)*
  (Provide a concise summary on the contents and progress made during the advisor meeting.)

Messaged professor Shannon for written expectations for the project in reference to senior design outcomes.