

Total Hours per Week by Type of Activity

| Week | Start | End | Supervisor discussion | Team discussion | Design | Coding | Documentation | Testing, debugging | Research, training, learning | Other | Total hours for the week |
|-----------------------|-------|------|-----------------------|-----------------|------------|-------------|---------------|--------------------|------------------------------|-------------|--------------------------|
| 1 | 1/26 | 2/1 | 0.0 | 0.0 | 0.0 | 0.0 | 5.8 | 0.0 | 4.0 | 7.1 | 16.9 |
| 2 | 2/2 | 2/8 | 0.0 | 0.0 | 0.0 | 0.5 | 8.8 | 0.0 | 6.7 | 0.0 | 16.0 |
| 3 | 2/9 | 2/15 | 2.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 | 16.3 | 0.0 | 23.3 |
| 4 | 2/16 | 2/22 | 0.0 | 0.0 | 0.0 | 15.1 | 2.5 | 0.0 | 6.5 | 0.0 | 24.1 |
| 5 | 2/23 | 3/1 | 0.0 | 0.0 | 4.5 | 5.7 | 4.0 | 0.0 | 1.5 | 1.0 | 16.7 |
| 6 | 3/2 | 3/8 | 0.0 | 0.0 | 0.5 | 0.0 | 2.5 | 0.0 | 12.7 | 0.5 | 16.2 |
| 7 | 3/9 | 3/15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 25.6 | 1.0 | 27.1 |
| 8 | 3/16 | 3/22 | 0.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 13.8 | 0.0 | 15.3 |
| 9 | 3/23 | 3/29 | 2.0 | 0.0 | 0.0 | 0.0 | 8.3 | 0.0 | 19.3 | 0.5 | 30.1 |
| 10 | 3/30 | 4/5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 18.8 | 1.5 | 20.8 |
| 11 | 4/6 | 4/12 | 0.0 | 0.0 | 0.0 | 2.0 | 2.3 | 0.0 | 11.0 | 0.5 | 15.8 |
| 12 | 4/13 | 4/19 | 0.0 | 0.0 | 0.8 | 2.0 | 8.5 | 1.0 | 0.5 | 0.5 | 13.3 |
| 13 | 4/20 | 4/26 | 0.0 | 0.0 | 1.0 | 13.3 | 0.6 | 3.0 | 0.5 | 0.0 | 18.4 |
| 14 | 4/27 | 5/3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15 | 5/4 | 5/10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 16 | 5/11 | 5/17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Semester Total | | | 4.5 | 0.0 | 6.8 | 38.6 | 50.3 | 4.0 | 137.2 | 12.6 | 254.0 |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|---|---|--|
| Sun 1/26/25 | 4:00 PM | 5:30 PM | 1.5 | Other | Reviewed course materials and communications on Blackboard & updated my calendar app with course calendar | Set up Fastmail so Blackboard notifications are not filtered as spam | |
| Sun 1/26/25 | 6:00 PM | 9:00 PM | 3.0 | Other | Started filling out intake survey, preparing resume, and reviewing project proposal requirements | Finish intake survey and continue working on project proposal | |
| Mon 1/27/25 | 5:00 PM | 7:05 PM | 2.1 | Other | Attended orientation & took quiz | | |
| Wed 1/29/25 | 5:00 PM | 7:00 PM | 2.0 | Documentation | Brainstormed ideas for project proposal. Talked to supervisor over text messages. | Design a project that meets course requirements & that I want to work on | Project needs to be complex enough, and ideally would solve a real-world need. |
| Wed 1/29/25 | 11:00 PM | 11:30 PM | 0.5 | Documentation | Looked into timelog template and examples to determine what it needs to do | | |
| Thu 1/30/25 | 12:30 AM | 2:00 AM | 1.5 | Documentation | Adapted timelog template for my own needs | | Added start and end times so it can calculate hours, and changed formatting. |
| Thu 1/30/25 | 3:30 AM | 5:00 AM | 1.5 | Documentation | Filled out and submitted intake survey. Uploaded resume and saved as draft. Worked on project proposal. | Upload first timelog when it is done. Work on refining project proposal. | I have a supervisor but the project proposal is still very nebulous. |
| Thu 1/30/25 | 6:40 AM | 8:40 AM | 2.0 | Research, training, learning | Research into project proposals and games that could be used as inspiration. | | Could go back to ideas for projects I've been wanting to do going years back. |
| Fri 1/31/25 | | | 0.5 | Other | Download and install Unity, Adobe CC, Maya, and other software that might be used for project. | | |
| Fri 1/31/25 | 9:00 AM | 11:00 AM | 2.0 | Research, training, learning | Research into game engines, physics, procedural generation, and other game-related topics | Pick a game engine & decide which area to focus on for differentiating this project from others | Orbital mechanics simulator suggested by ChatGPT seems like the best idea |
| Sat 2/1/25 | | | 0.3 | Documentation | Write out reflections on time spent and submit time logs along with resume | | |
| Wed 2/5/25 | 10:00 PM | 11:59 PM | 2.0 | Research, training, learning | Researched terms and concepts used in project proposal survey | | |
| Thu 2/6/25 | 12:01 AM | 4:00 AM | 4.0 | Documentation | Updated project proposal & filled out related survey. Created GitHub Project issue tracker. | | |
| Thu 2/6/25 | 5:30 AM | 6:00 AM | 0.5 | Coding | Created & set up GitHub repo for the project | | |
| Thu 2/6/25 | 6:00 AM | 7:00 AM | 1.0 | Research, training, learning | Researched workflow & project management software involving Unity, Git, and Github | Go through Unity 3D tutorials | |
| Fri 2/7/25 | 1:50 PM | 3:50 PM | 2.0 | Documentation | Further updated project proposal and survey | | |
| Sat 2/8/25 | 12:01 AM | 2:30 AM | 2.5 | Documentation | Completed and submitted project proposal and survey | Work out project schedule and scope | |
| Sat 2/8/25 | 11:20 AM | 3:00 PM | 3.7 | Research, training, learning | Completed a Unity Beginning 3D Game Development tutorial | Continue with 3D tutorials | |
| Sat 2/8/25 | | | 0.3 | Documentation | Worked on time logs and writing reflections | | |
| Sun 2/9/25 | 12:01 AM | 3:00 AM | 3.0 | Research, training, learning | Worked on another Unity 3D tutorial | | |
| Mon 2/10/25 | 12:01 PM | 2:00 PM | 2.0 | Supervisor discussion | Meeting with supervisor | | |
| Wed 2/12/25 | 10:30 AM | 11:30 AM | 1.0 | Research, training, learning | Research for Diagrams deliverables & GitHub Projects | | |
| Wed 2/12/25 | 12:01 PM | 2:00 PM | 2.0 | Documentation | Work on Diagrams slide deck | | |
| Wed 2/12/25 | 2:00 PM | 4:00 PM | 2.0 | Research, training, learning | Work through Unity 3D tutorials | | |
| Thu 2/13/25 | 12:15 AM | 1:30 AM | 1.3 | Research, training, learning | Work through Unity 3D tutorials | Tutorials are too basic or have irrelevant info for my project. | Will probably have to figure it out on my own with Google searches. |
| Thu 2/13/25 | 3:15 PM | 4:45 PM | 1.5 | Documentation | Work on diagrams | Start sketching out UI next | |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|--|---|--|
| Fri 2/14/25 | 7:00 AM | 8:00 AM | 1.0 | Documentation | Submit project tools survey. Create changelog and readme docs. | | |
| Fri 2/14/25 | 10:30 AM | 3:30 PM | 5.0 | Research, training, learning | Work through Unity Essentials tutorials | | |
| Sat 2/15/25 | 7:00 AM | 11:00 AM | 4.0 | Research, training, learning | Work through Unity Essentials tutorials | | |
| Sat 2/15/25 | | | 0.5 | Documentation | Update and reformat timelogs. Write reflections. | | |
| Tue 2/18/25 | 1:50 PM | 2:50 PM | 1.0 | Research, training, learning | Research on how to do various things in Unity, such Git LFS usage, floating origin, 64-bit precision, and custom models | | |
| Wed 2/19/25 | 3:45 AM | 5:30 AM | 1.8 | Coding | Create new project in Unity, set it up for Git, and check in to repo | Had to configure GitHub Desktop on Windows for long filenames & CRLF conversion | After doing some research, I think it would be better to use URP instead of HDRP, and to consistently use LF for line endings even on Windows. |
| Wed 2/19/25 | 8:30 AM | 1:00 PM | 4.5 | Coding | Work on creating a solar system in Unity project. Convert to URP & set line endings to be LF. Delete old repo and start afresh with a new repo in order to stay within LFS limits. | Challenges: Solar system distances with 32-bit floats in Unity engine; Understanding how Git LFS works | Due to configuration issues, many large files were checked in to git. To undo this mistake, the old repo was deleted and a new one created in its place. |
| Wed 2/19/25 | | | 1.0 | Documentation | Migrate issues to new project and add more tasks to do. Take screenshots of GitHub repo and project for slide deck. | Challenge was understanding how GitHub Projects work. | I created a new project in GitHub but I didn't need to. Now the URL needs to be updated. |
| Wed 2/19/25 | 9:00 PM | 10:30 PM | 1.5 | Research, training, learning | Research how to add 2D and UI elements to a 3D scene | Challenges: finding the best practices for adding UI elements. I can think of many ways to do this, but what is the best way? | |
| Thu 2/20/25 | 12:30 PM | 4:00 PM | 3.5 | Research, training, learning | Research orbital mechanics, Keplerian elements, and planetary data. | I found several sources of data with varying levels of precision and slightly different values. Challenge is deciding which to use and what level of precision is needed. | |
| Thu 2/20/25 | 9:00 PM | 11:30 PM | 2.5 | Coding | Work on rendering orbit lines & camera control. | Challenge: getting used to how Unity scripting works | |
| Fri 2/21/25 | 2:15 PM | 5:45 PM | 3.5 | Coding | Work on camera controls | | |
| Fri 2/21/25 | 9:30 PM | 10:00 PM | 0.5 | Research, training, learning | Research coordinate systems | | Tricky part is when I need to apply rotations in 3d space so that the orbits have the proper shape and inclination |
| Fri 2/21/25 | 10:00 PM | 10:30 PM | 0.5 | Documentation | Manage items in issue tracker | | |
| Sat 2/22/25 | 10:00 AM | 11:00 AM | 1.0 | Coding | Work on ability to change the camera's target | | Half of coding time is looking up how to do things and could be categorized as research. |
| Sat 2/22/25 | 3:00 PM | 4:45 PM | 1.8 | Coding | More work on camera control | Next steps: work on UI | |
| Sat 2/22/25 | | | 1.0 | Documentation | Managing issues and recording time spent on tasks. Update diagrams slide deck & timelog. | | Managing the project takes time away from research and coding, but it does help in prioritizing tasks and keeping on track towards a goal. |
| Tue 2/25/25 | 6:30 PM | 9:00 PM | 2.5 | Design | Brainstormed concepts for UI and made paper sketches | | UI will evolve as feature set is developed |
| Wed 2/26/25 | | | 0.5 | Other | Scheduled live presentation and reviewed what I need for it | | |
| Thu 2/27/25 | 12:30 PM | 2:30 PM | 2.0 | Design | Updated and fleshed out design for MVP. | Did not find any good free assets for spaceship, so I'll create my own in Maya. | I have a Google Doc where I write down my thoughts on the project as they come to me which helps me plan what I want to do next. |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|---|---|--|
| Thu 2/27/25 | | | 1.0 | Documentation | Updated issue tracker. Reviewed what needs to be done and planned out what I want to work on next. | Reserve a few hours to create the demo video | |
| Thu 2/27/25 | 8:15 PM | 9:45 PM | 1.5 | Research, training, learning | Researched best practices for creating UI in Unity, comparing Unity UI vs. newer UI Toolkit. | | |
| Thu 2/27/25 | | | 0.5 | Other | Rescheduled live presentation and reviewed its requirements again. | It's really confusing that there are two instructors with two different pages for scheduling this | |
| Thu 2/27/25 | 9:45 PM | 11:59 PM | 2.2 | Coding | Added basic UI to show camera position parameters. | Work on icons to represent planets when distance is far | |
| Fri 2/28/25 | 12:01 AM | 1:30 AM | 1.5 | Coding | Added icons that show planet position when camera distance is too far to show planet itself | | |
| Fri 2/28/25 | 2:00 PM | 4:00 PM | 2.0 | Coding | Updated planet icons including its script and color coding. Reorganized GameObject hierarchy. Added orbits and icons for outer planets. | | |
| Fri 2/28/25 | | | 0.5 | Documentation | Created spreadsheet to keep track of color coding of planets and decided on more colors | | |
| Fri 2/28/25 | 5:15 PM | 7:15 PM | 2.0 | Documentation | Created video showing project progress. | | |
| Sat 3/1/25 | | | 0.5 | Documentation | Updated timelogs and submitted them along with demo video | | |
| Mon 3/3/25 | 4:45 PM | 5:15 PM | 0.5 | Other | Reviewed next steps and next deliverables. Checked that this week's deliverables have been submitted. | | |
| Wed 3/5/25 | 2:30 AM | 3:30 AM | 1.0 | Documentation | Updated issue tracker and project journal. Researched space news. | | With space activity focused on going to the Moon, maybe my project should focus on Earth-to-Moon missions? |
| Fri 3/7/25 | 1:00 AM | 2:00 AM | 1.0 | Documentation | Updated project journal with potential project direction. | | Need to have more concrete goals and plans for the project to proceed further |
| Fri 3/7/25 | 2:15 PM | 2:45 PM | 0.5 | Design | Sketched a new screen flow diagram. | | |
| Fri 3/7/25 | 2:45 PM | 6:45 PM | 4.0 | Research, training, learning | Completed Unity tutorial on UI Components and Welcome to Creative Core Pathway. Researched Intuitive Machines lander. | | I'm finding myself stuck in Unity because I don't know how create what I envision in my sketches |
| Fri 3/7/25 | 6:45 PM | 9:15 PM | 2.5 | Research, training, learning | Completed Unity tutorials in Creative Core Pathway up to Copyrights. | | |
| Fri 3/7/25 | 10:15 PM | 11:59 PM | 1.7 | Research, training, learning | Completed up to "Critical Evaluation" tutorial in Unity Creative Core. | | |
| Sat 3/8/25 | 2:45 AM | 3:45 AM | 1.0 | Research, training, learning | Completed first section of "Shaders & Materials" tutorial in Unity Creative Core. | | |
| Sat 3/8/25 | 7:15 AM | 9:15 AM | 2.0 | Research, training, learning | Completed "Map materials with textures" tutorial in Unity Creative Core. | | |
| Sat 3/8/25 | 8:30 PM | 10:00 PM | 1.5 | Research, training, learning | Completed "Bump mapping" tutorial in Unity Creative Core. | Challenge: getting a long block of uninterrupted time to work on project | |
| Sat 3/8/25 | | | 0.5 | Documentation | Updated timelogs | | |
| Sun 3/9/25 | 12:01 AM | 2:00 AM | 2.0 | Research, training, learning | Completed "more texture mapping" tutorial in Unity Creative Core. | | |
| Sun 3/9/25 | 4:30 AM | 6:00 AM | 1.5 | Research, training, learning | Completed "Shader Graph" tutorial in Unity Creative Core. | | |
| Sun 3/9/25 | 10:45 AM | 12:45 PM | 2.0 | Research, training, learning | Completed "still life" tutorial in Unity Creative Core. | | |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|---|------------------------------|---|
| Sun 3/9/25 | 8:00 PM | 9:30 PM | 1.5 | Research, training, learning | Completed all sections of "Shaders & Materials" tutorial in Unity Creative Core. | | |
| Mon 3/10/25 | 1:00 AM | 1:30 AM | 0.5 | Research, training, learning | Completed "Get started with lighting" tutorial in Unity Creative Core. | | |
| Mon 3/10/25 | 6:00 AM | 8:15 AM | 2.3 | Research, training, learning | Completed tutorials up to "Configure shadows in your scene" in Unity Creative Core. | | The section on lighting is much longer than the one for shaders and materials |
| Mon 3/10/25 | 2:30 PM | 3:30 PM | 1.0 | Research, training, learning | Completed "Bake a lightmap" tutorial in Unity Creative Core. | | |
| Mon 3/10/25 | 9:00 PM | 9:45 PM | 0.8 | Research, training, learning | Completed "Light probes" tutorial in Unity Creative Core. | | |
| Tue 3/11/25 | 3:00 AM | 6:30 AM | 3.5 | Research, training, learning | Completed tutorials up to "Improve reflections" in Unity Creative Core. | | |
| Wed 3/12/25 | 3:30 AM | 5:00 AM | 1.5 | Research, training, learning | Completed tutorials in "Creative Core: Lighting" | | |
| Thu 3/13/25 | 12:30 AM | 1:30 AM | 1.0 | Research, training, learning | Worked on lighting on guided project in Unity & completed lighting quiz | | |
| Thu 3/13/25 | 5:30 AM | 7:30 AM | 2.0 | Research, training, learning | Completed first 3 sections of Animation tutorial in Unity Creative Core | | |
| Thu 3/13/25 | 9:30 AM | 10:30 AM | 1.0 | Research, training, learning | Completed next 2 sections of Animation tutorial in Unity Creative Core | | |
| Thu 3/13/25 | 1:30 PM | 2:00 PM | 0.5 | Other | Prepared for live presentation | | |
| Thu 3/13/25 | 2:00 PM | 2:30 PM | 0.5 | Other | Gave live presentation over Zoom to instructors | | |
| Fri 3/14/25 | 5:45 AM | 7:45 AM | 2.0 | Research, training, learning | Completed last 2 sections and quiz of Animation tutorial in Unity Creative Core | | |
| Fri 3/14/25 | 11:30 AM | 12:30 PM | 1.0 | Research, training, learning | Completed first 3 sections of VFX tutorial in Unity Creative Core | | |
| Sat 3/15/25 | 8:30 AM | 10:30 AM | 2.0 | Research, training, learning | Completed last 4 sections and quiz of VFX tutorial in Unity Creative Core | | |
| Sat 3/15/25 | | | 0.5 | Documentation | Updated timelogs & submitted supervisor interim report | | |
| Mon 3/17/25 | 7:30 AM | 10:30 AM | 3.0 | Research, training, learning | Completed Camera tutorial and first 2 sections of Post-Processing tutorial in Unity Creative Core | | |
| Mon 3/17/25 | 3:00 PM | 4:45 PM | 1.8 | Research, training, learning | Completed all sections of Post-Processing tutorial in Unity Creative Core | | |
| Mon 3/17/25 | | | 0.5 | Supervisor discussion | Emailed and coordinated with supervisor | | |
| Tue 3/18/25 | 2:00 AM | 3:00 AM | 1.0 | Research, training, learning | Completed 2 sections of Audio tutorial in Unity Creative Core | | |
| Wed 3/19/25 | 6:30 AM | 7:30 AM | 1.0 | Research, training, learning | Completed 2 sections of Audio tutorial in Unity Creative Core | | |
| Wed 3/19/25 | 9:00 AM | 11:59 AM | 3.0 | Research, training, learning | Completed all sections of Audio tutorial in Unity Creative Core & 3 sections of UI tutorial. | | |
| Thu 3/20/25 | 8:30 AM | 11:30 AM | 3.0 | Research, training, learning | Completed 6 sections of UI tutorial in Unity Creative Core | | |
| Fri 3/21/25 | 7:30 PM | 8:30 PM | 1.0 | Research, training, learning | Completed 2 sections of Prototyping tutorial in Unity Creative Core | | |
| Sat 3/22/25 | 10:00 AM | 10:30 AM | 0.5 | Documentation | Created a prototype design document | | |
| Sat 3/22/25 | | | 0.5 | Documentation | Updated timelogs | | |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|--|--|--|
| Sun 3/23/25 | 8:00 AM | 11:00 AM | 3.0 | Research, training, learning | Completed 5 sections of Prototyping tutorial in Unity Creative Core | | |
| Sun 3/23/25 | 1:15 PM | 4:30 PM | 3.3 | Research, training, learning | Completed remainder of Prototyping tutorial in Unity Creative Core. Going back and finishing up skipped sections of tutorials. | | |
| Mon 3/24/25 | 12:01 PM | 2:00 PM | 2.0 | Supervisor discussion | Met with supervisor | | |
| Mon 3/24/25 | 2:30 PM | 3:00 PM | 0.5 | Other | Reviewed deliverables for next week | | |
| Wed 3/26/25 | 11:15 AM | 1:00 PM | 1.8 | Documentation | Collected images and did research for slide deck | Plan is to explain some of the challenges I faced up to this point in the project | |
| Wed 3/26/25 | 2:15 PM | 3:15 PM | 1.0 | Documentation | Collected more images for slide deck | | |
| Wed 3/26/25 | 6:00 PM | 8:00 PM | 2.0 | Documentation | Took screenshots of project and collected more images for slide deck | | |
| Wed 3/26/25 | 9:00 PM | 11:59 PM | 3.0 | Documentation | Made outline for new version of slide deck. Reworked slide deck to have a narrative | | |
| Thu 3/27/25 | 10:45 AM | 2:45 PM | 4.0 | Research, training, learning | Completed first 6 sections of Junior Programmer pathway in Unity | | |
| Thu 3/27/25 | 4:15 PM | 7:15 PM | 3.0 | Research, training, learning | Completed 1st Mission of Junior Programmer pathway in Unity | | |
| Thu 3/27/25 | 10:30 PM | 11:30 PM | 1.0 | Research, training, learning | Completed 1st section of 2nd mission of Junior Programmer pathway in Unity | | |
| Fri 3/28/25 | 3:15 PM | 6:15 PM | 3.0 | Research, training, learning | Completed tutorials up to Challenge 2 of Basic Gameplay mission of Junior Programmer pathway | | Most of this content is stuff I already know, but I am scouring them to make sure I don't miss anything. I have found at least one tip that I can use in my project so far. And understanding how programming is supposed to be done is important. |
| Sat 3/29/25 | 1:00 PM | 3:00 PM | 2.0 | Research, training, learning | Completed 2 quizzes in Junior Programmer pathway. Started Unit 3. | | |
| Sun 3/30/25 | 12:01 AM | 2:00 AM | 2.0 | Research, training, learning | Completed 2 labs & 2 sections in Unit 3 of Junior Programmer pathway. | | |
| Sun 3/30/25 | | | 0.5 | Documentation | Updated timelogs & submitted slides | | |
| Sun 3/30/25 | 5:30 PM | 7:30 PM | 2.0 | Research, training, learning | Completed up to Lesson 3.4 in Unit 3 of Junior Programmer pathway. | | |
| Mon 3/31/25 | | | 2.0 | Research, training, learning | Completed remainder of Unit 3 of Junior Programmer pathway. | | |
| Wed 4/2/25 | 5:45 PM | 6:45 PM | 1.0 | Other | Reviewed schedule, documentation, progress, and next steps. Planned for Demo 2 video. | | |
| Thu 4/3/25 | 12:45 AM | 2:30 AM | 1.8 | Research, training, learning | Completed up to Lesson 4.2 of Junior Programmer pathway | | |
| Thu 4/3/25 | 1:15 PM | 2:45 PM | 1.5 | Research, training, learning | Completed up to Lesson 4.4 of Junior Programmer pathway | | |
| Thu 4/3/25 | 9:00 PM | 11:59 PM | 3.0 | Research, training, learning | Completed Unit 4 of Junior Programmer pathway | | |
| Fri 4/4/25 | 10:00 AM | 1:00 PM | 3.0 | Research, training, learning | Completed up to Lesson 5.2 of Junior Programmer pathway | Had a roadblock with the tutorial UI input not working. Turns out it was Unity's new Input System. | I had to figure out how to solve this issue on my own, because the tutorials assume you are using the old Input System |

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|----------|-------|------------------------------|--|--|--|
| Fri 4/4/25 | | | 0.5 | Other | Planned out what to record for Demo 2 video | Write a script, plan for what to record, and do a few takes of the recording to get it right | |
| Fri 4/4/25 | 6:15 PM | 7:15 PM | 1.0 | Research, training, learning | Completed up to Lesson 5.3 of Junior Programmer pathway | | |
| Fri 4/4/25 | 8:45 PM | 11:15 PM | 2.5 | Research, training, learning | Completed up to Quiz 5 of Junior Programmer pathway | | |
| Sat 3/29/25 | | | 0.5 | Documentation | Updated timelogs | | |
| Sun 4/6/25 | 2:30 PM | 4:15 PM | 1.8 | Documentation | Wrote, revised, recorded, and edited Demo 2 video, including using OBS, Unity, Google Slides, and Adobe Premiere | Challenge: preparation for the video takes a lot of time and then it has to be edited | Demo 2 Video |
| Mon 4/7/25 | 4:45 PM | 5:15 PM | 0.5 | Other | Reviewed requirements for the final project presentation and video that were posted today | Will need to plan out how much time to spend on project itself, the slides, and the video | |
| Wed 4/9/25 | 9:15 AM | 11:45 AM | 2.5 | Research, training, learning | Completed up to Portfolio of Junior Programmer pathway | | |
| Wed 4/9/25 | 4:30 PM | 7:00 PM | 2.5 | Research, training, learning | Completed up to "Counting Prototype" of Junior Programmer pathway | | Changing platforms or building simple projects takes a long time. A simple WebGL build takes around 8 minutes. |
| Wed 4/9/25 | 8:30 PM | 9:30 PM | 1.0 | Research, training, learning | Completed up to "Create a scene flow" of Junior Programmer pathway | | |
| Thu 4/10/25 | 12:01 AM | 1:30 AM | 1.5 | Research, training, learning | Completed "Scene Flow and Data" mission of Junior Programmer pathway | | |
| Thu 4/10/25 | 4:00 PM | 7:30 PM | 3.5 | Research, training, learning | Completed last mission of Junior Programmer pathway | | |
| Sat 4/12/25 | 9:45 PM | 11:45 PM | 2.0 | Coding | Added title scene and a scene to test calculating orbits to Unity project | Next steps: trying to draw orbit lines as 2D UI elements on top of 3D view | |
| Sat 4/12/25 | | | 0.5 | Documentation | Updated timelogs | | |
| Mon 4/14/25 | 12:01 AM | 12:30 AM | 0.5 | Research, training, learning | Researched antialiased line drawing in Unity | I know how to draw antialiased lines in OpenGL, but not in Unity | |
| Wed 4/16/25 | 4:45 PM | 5:15 PM | 0.5 | Other | Reviewed latest announcements, the self-assessment survey, and final deliverables information on Blackboard. | | |
| Thu 4/17/25 | 2:30 PM | 9:00 PM | 6.5 | Documentation | Expanded slide presentation as it relates to my learning outcomes & other content | | |
| Fri 4/18/25 | 8:00 PM | 9:00 PM | 1.0 | Documentation | Managed the project by adding items to the issue tracker and planning out next steps | | |
| Sat 4/19/25 | 4:00 PM | 4:45 PM | 0.8 | Design | Sketched out a new storyboard | | |
| Sat 4/19/25 | 4:45 PM | 6:45 PM | 2.0 | Coding | Worked on implementing latest storyboard in Unity | | |
| Sat 4/19/25 | | | 1.0 | Testing, debugging | Tested newly added scenes and code | | |
| Sat 4/19/25 | | | 0.5 | Documentation | Updated timelogs | | |
| Tue 4/22/25 | 3:15 PM | 5:15 PM | 2.0 | Coding | Added Intro and EndCredit scenes from latest storyboard in Unity. Updated other scenes. | | |
| Tue 4/22/25 | 7:15 PM | 8:30 PM | 1.3 | Coding | Added Earth and some lines to Orbit scene | | |
| Thu 4/24/25 | 4:15 PM | 9:15 PM | 5.0 | Coding | Wrote code for orbit line calculations and animation. | | |
| Thu 4/24/25 | | | 1.0 | Testing, debugging | Tested calculations and animation. | | |

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Project: Orbital Mechanics Simulator

Activities Completed

| Date | Start | End | Hours | Category | Description of completed task | Challenges and/or next steps | Reflection |
|-------------|----------|---------|-------|------------------------------|---|--|--|
| Fri 4/25/25 | 5:30 PM | 8:30 PM | 3.0 | Coding | Attempted to write code to calculate orbit position from time | Challenge: there is no closed form for this equation, so I will have to figure out the best approach | |
| Fri 4/25/25 | | | 0.3 | Documentation | Added issues in the issue tracker | | |
| Fri 4/25/25 | | | 0.5 | Research, training, learning | Researched the problem of calculating the eccentric anomaly from the mean anomaly | | |
| Sat 4/26/25 | 12:01 AM | 2:00 AM | 2.0 | Testing, debugging | Debugged and wrote code for the Orbit and other scenes. | | |
| Sat 4/26/25 | | | 0.3 | Documentation | Updated and closed issues in the issue tracker | | |
| Sat 4/26/25 | 4:00 PM | 5:00 PM | 1.0 | Design | Planned out gameplay and UI concepts in journal | | It's important to have a roadmap to know what features to work on and which features can be omitted from the final product |
| Sat 4/26/25 | 7:00 PM | 9:00 PM | 2.0 | Coding | Adapted code for Kepler orbit from another project & worked on Orbit scene | | There's existing code for orbital mechanics on Github, so I don't need to reinvent things. |
| Sat 4/19/25 | | | 0.5 | Documentation | Updated timelogs | | |