Ivy Dudzik

SolCycle
Project Documentation



Quick Details

SolCycle is a PC game created and published by the student-run studio Kinetic Bloom.

Steam: ***SolCycle***

Team Size: 19

Total Development Time: 20 Weeks

Engine: Unity

My name is Ivy Dudzik, and I'm a Technical Artist, 3D Modeler and Level Designer at Kinetic Bloom.

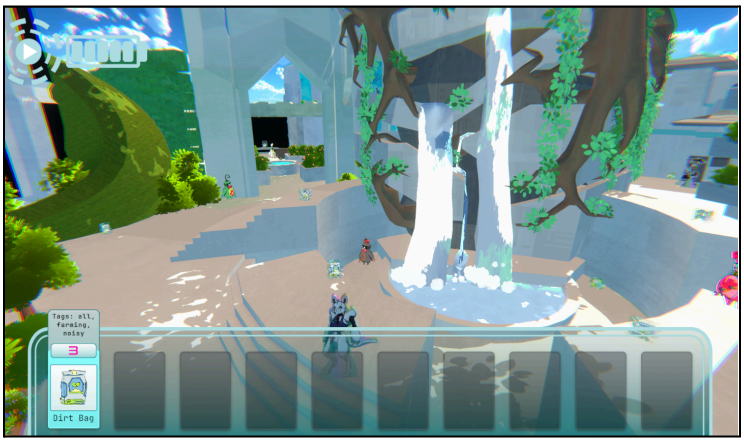
Tools Used: Blender, Unity, ProBuilder, Visual Studio

Primary Department: Art

Ivy Dudzik

Game Introduction

Enter the 3D sci-fi world of SolCycle! Play as a robot cat archaeologist, explore a post-human community rebuilt by plant-fueled robots, and barter with the locals in card-based gameplay! Learn to navigate the citizens' requests while under the spell of a time-loop. Don't forget to watch the clock!



Contributions

My contributions to SolCycle are somewhat cleanly split between two 10-week development periods which align with the final two quarters of the student school year of our dev team (spring and winter).

Winter

While my most evident contributions in winter were primarily focused on level construction and the production of assets for our level greybox, I was a core part of the 19-person team from the very beginning. I attended all meetings with the full dev team as well as attending all art meetings and even some of the programming meetings as a liaison from the art department. We operated on a 2-week sprint cycle, with tasks distributed via a GitHub projects board.

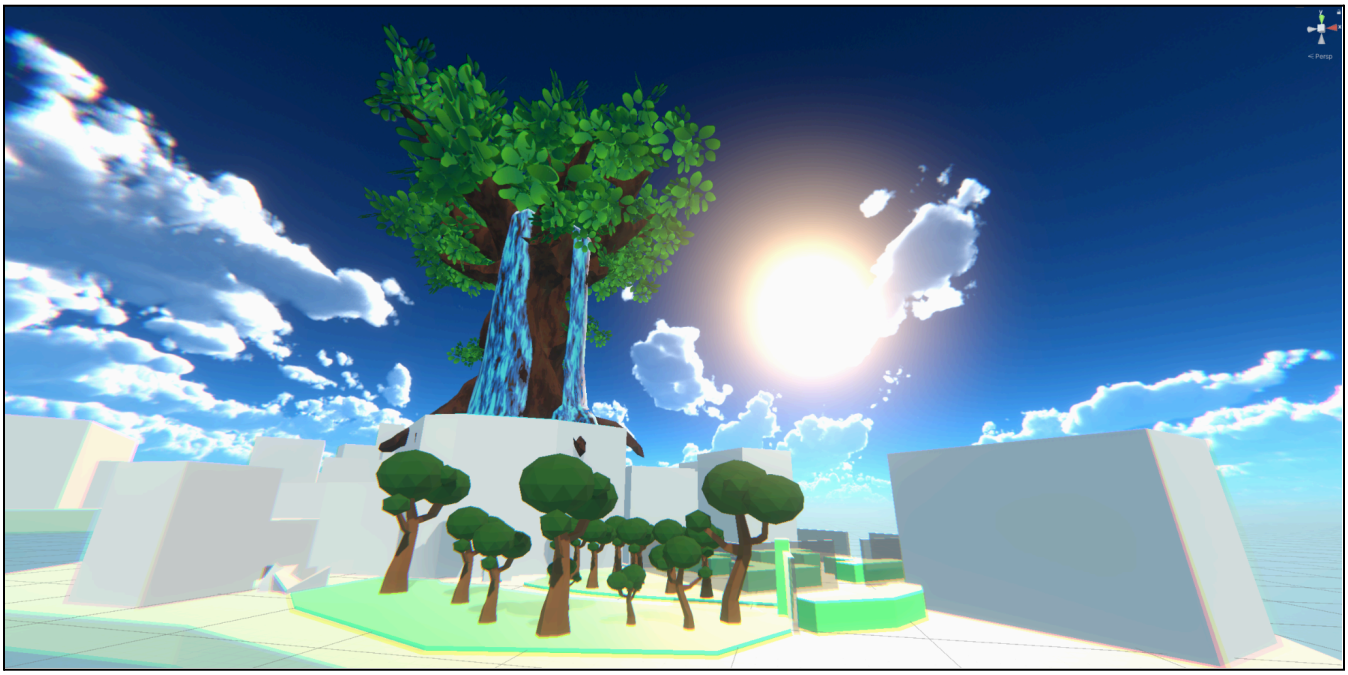
Our art department had four dedicated members, one of whom was primarily a producer. Since the other two dedicated artists were heavily focused on 2D (our characters were 2D in a 3D world, and we had a lot of UI art because of the core 2D minigame) I ended up doing a lot of the 3D prototyping work.

Early on, I pitched a concept for a map development pipeline so that it was transparent to production what our blockers were for making environmental art progress on the level. Across development, I was heavily involved with the design department and getting our 2D map design implemented (because our design department had only two members, they needed

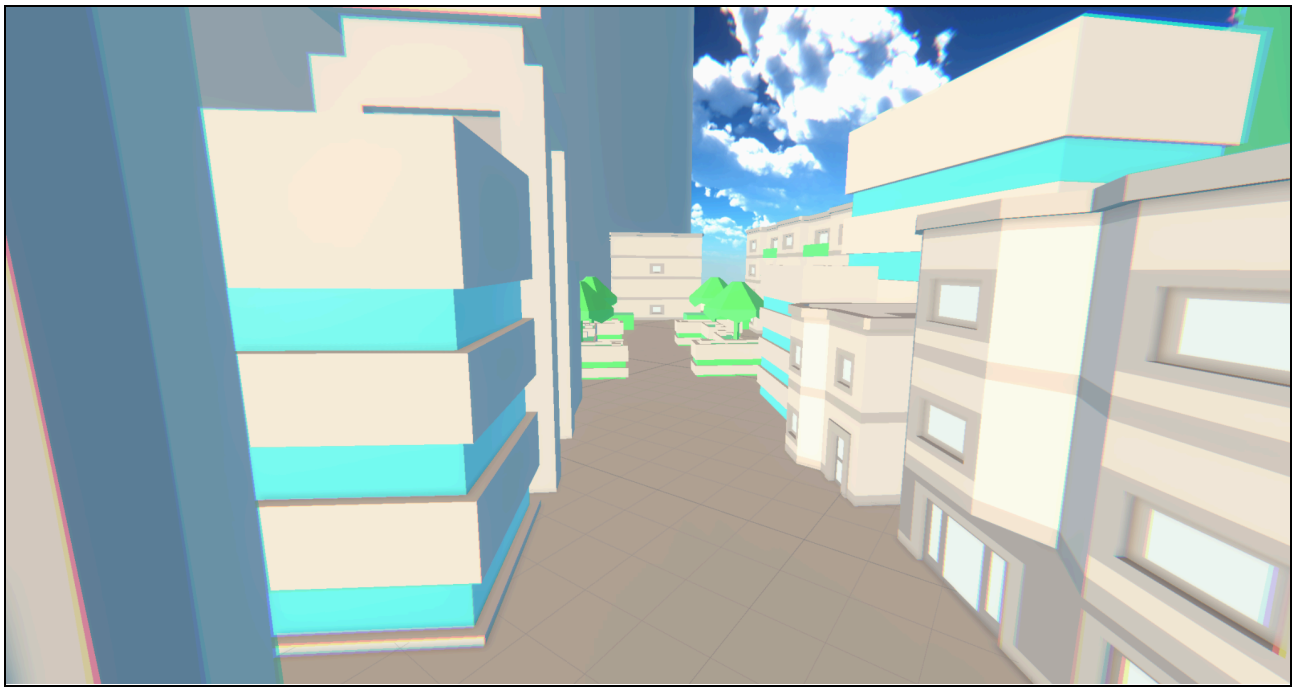
support completing the greybox), which meant a lot of the work that I did bled between art and design.

In terms of the major chunks of hands-on work I did in-engine throughout winter, it boils down to:

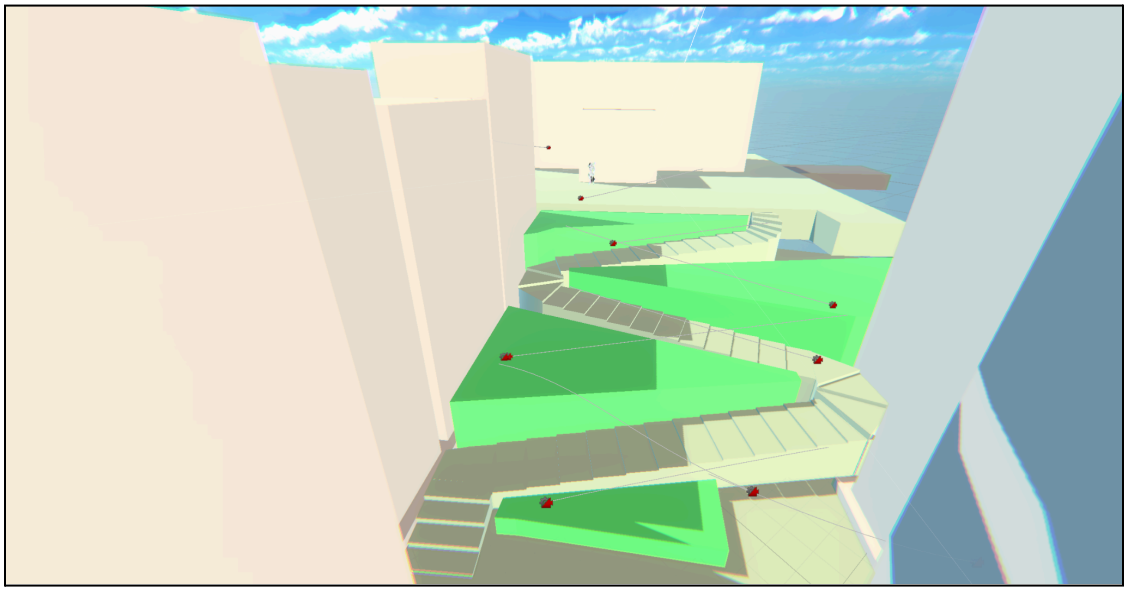
- Scene Lighting & Post-Processing Production
- Environment Concepting (Kitbash)
- Level Design Production (Greyboxing)



For scene lighting and post-production, I sourced and implemented a skybox, directional lighting, and bloom/chromatic aberration post-processing in Unity to match our aesthetic goals for the project. These additions can be seen in the current build.



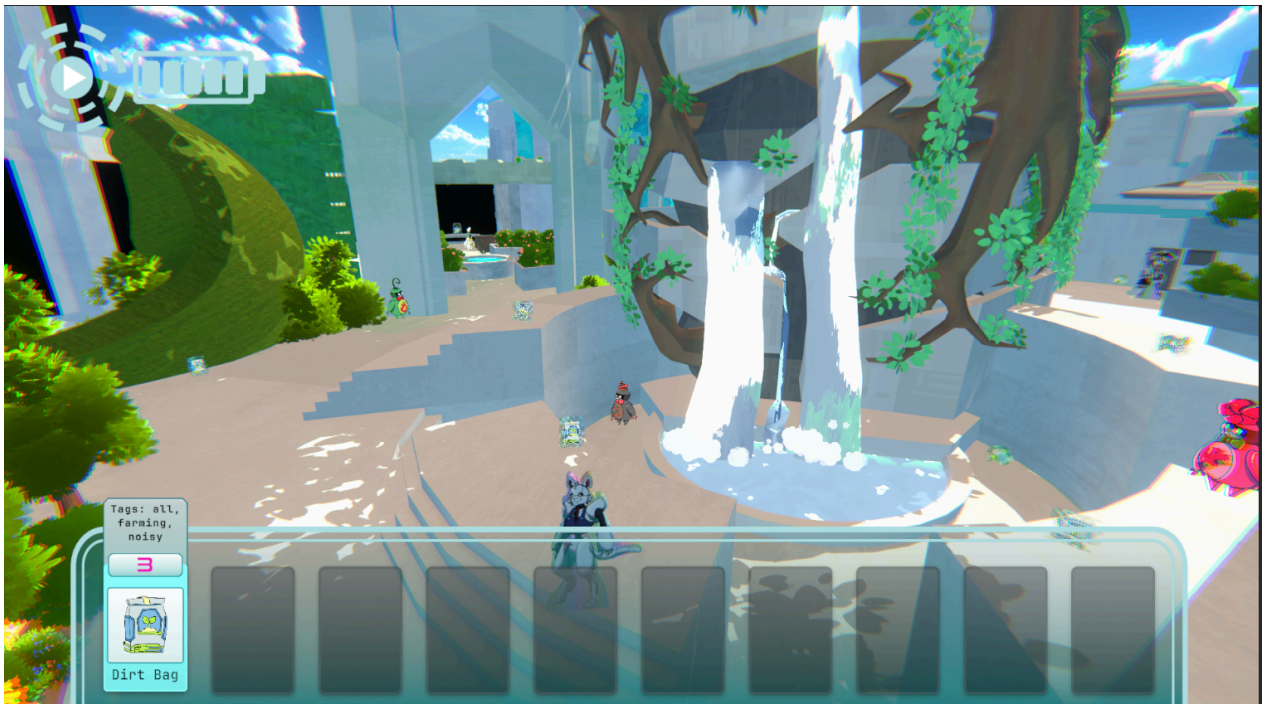
For environment concepting, I kitbashed third-party 3D “city” assets in Unity to try and get as close as possible to our artists concept sketches & moodboards. While I got some positive feedback on these implementations from the team, I was personally dissatisfied with them (they were sparse and not a good match for our art direction), and our lead designer agreed that using these 3D “sketches” as the basis for our level without greyboxing first was a bad idea. So I took up the task to make a more by-the-book greybox.



Referencing the design department's 2D drawing of the map, I used ProBuilder (an in-engine modeling tool in Unity) to model the entire level in low fidelity. Since the project is still in active development, this greybox is currently visible in the vertical slice build. It took a pretty extensive amount of time to model each building by hand, but it was much faster in ProBuilder than it would have been to create the scene using a more comprehensive modeling solution like Blender.

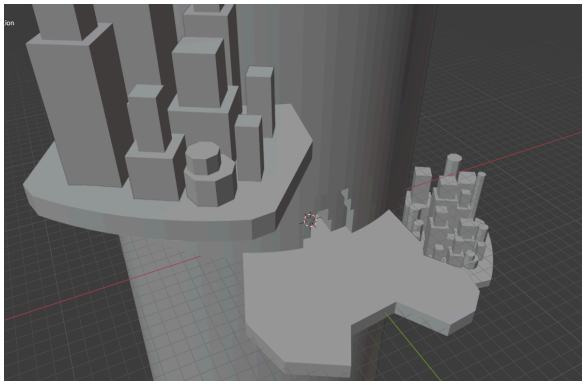
Spring

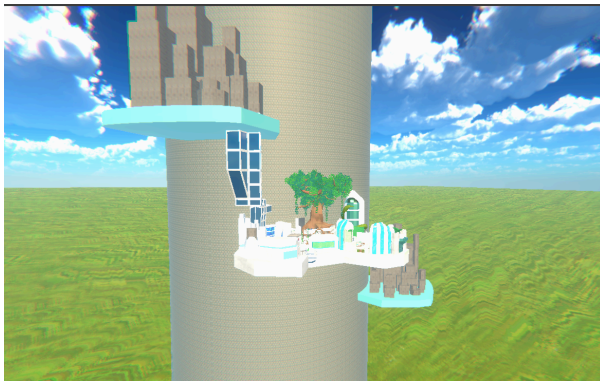
Spring brought new directions for our project! We had initially conceived of our game having a large sprawling map, but re-evaluation of our game's scope after creating a vertical slice allowed us to consider something smaller and much more lush. I think this was a great decision, because it let us make the most of our limited resources, and we were able to add a greater degree of detail to the world

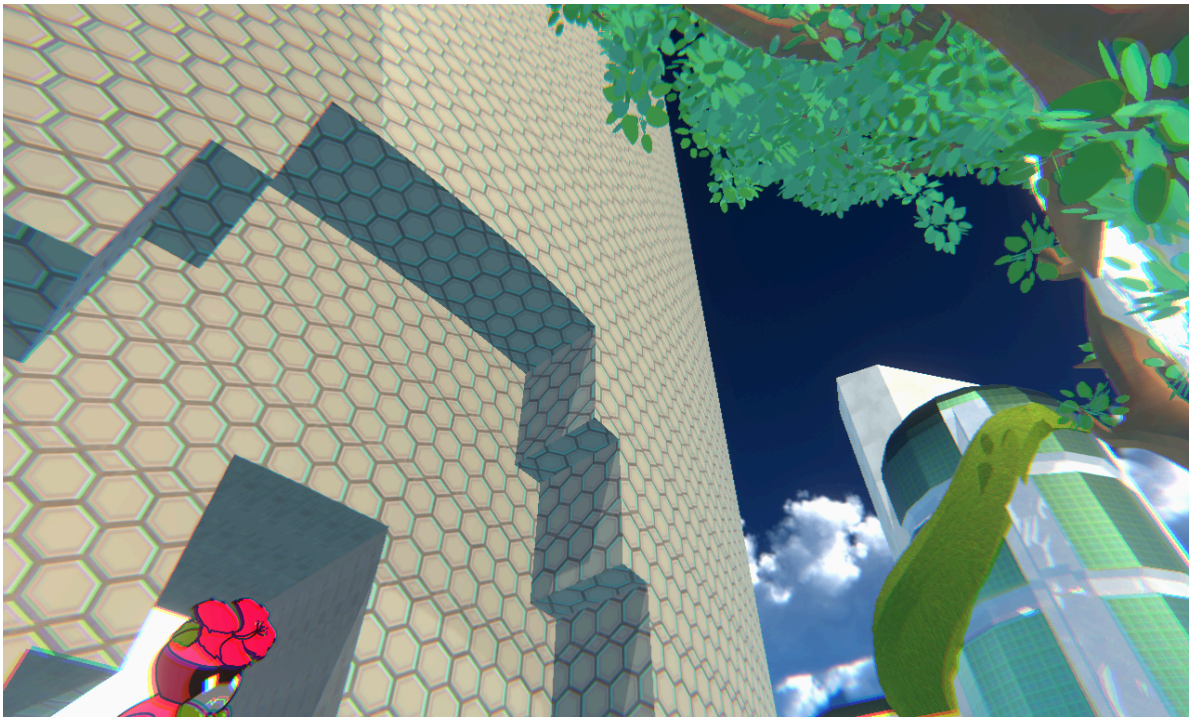


My primary area of focus for the spring quarter was getting every inch of our new 3D environment modeled, textured, and QA-ed in-game. I personally did a significant amount of

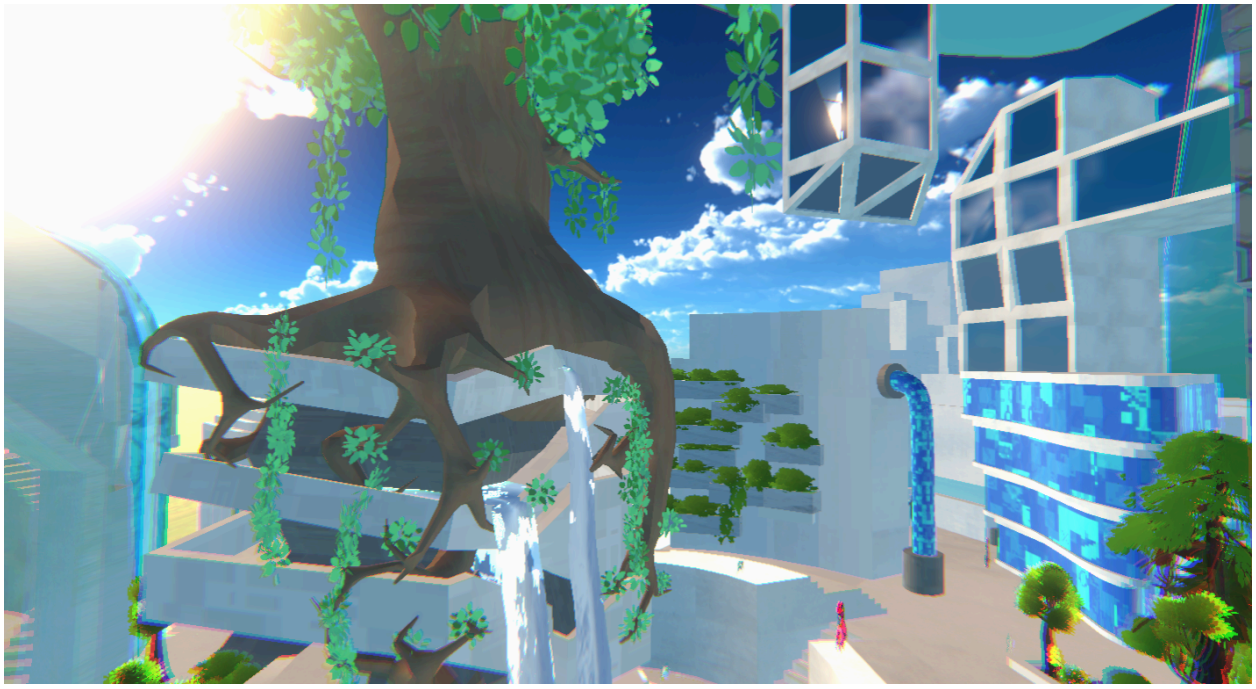
environmental concepting and modeling. I modeled the megastructure that the game takes place upon and many of the buildings in the dense portion of the city.







Additionally, I served as a producer at several points in the quarter. I created lists of tasks for other artists (and myself!) to make sure that we completed textures, models, and implementation on-time.



I used Blender for 3D modeling, got my hands dirty in Unity and Git to implement models, and used our team Discord, in-person meetups, Google Docs, and Github Projects to coordinate tasks.

In addition to this primary focus, I also supported the sound department on our project by auditioning for- and subsequently voicing- one of our three primary NPCs.

Personal Takeaways

Being a part of this project, I have learned a lot about 3D modeling, specifically 3D level design and construction (especially how important it is to leave time for iteration!). One shortcoming of our first development period is that we did not properly allocate time for separate passes over the 3D level with specific goals at each pass (greybox, 3D art assets implemented, lighting, etc).

Another challenge was that, because SolCycle is a student project, we were designing the game in parallel to producing art for it (since every department was developing synchronously). This led to major blockers on 3D asset creation in particular, which only got done in the Spring development period

In terms of what went well, I believe I succeeded at constructing an atmosphere through lighting, skybox, and post-processing that achieved our foundational aesthetic goals. Our world is a bright, bloomy, electric wonderland.

Most importantly, despite challenges and setbacks, our final version of the 3D level is charming, communicative, and very in-line with our initial concepts. To me, this represents a massive success, especially since we had to overcome a disappointing result for our vertical slice.

What Comes Next?

SolCycle has been published on Steam, which means I must now move on to my next project! I'm really thankful for the experience of working with everyone else at Kinetic Bloom, and I hope to work as a team again someday!

Thank you for reading!