

*A Portrait of the Artist's Summer*

**An Honors Thesis (CS 498)**

**by**

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**Abstract:**

In *A Portrait of the Artist's Summer*, the player controls Natalie, a high school senior who is spending a week at her formerly estranged sister's art conservation studio. Natalie and her sister have not spoken in twelve years and are now attempting to reconcile. Over these seven days, the player can influence the relationship between the sisters through dialogue options, controlling how the game unfolds and leading to one of three endings.

In doing this project, I hoped to combine both what I had learned from the computer science department and from my classes at the Honors College. I also wanted to fill a gap I have noticed in the video game industry by creating a game that successfully told women's stories. I was able to create the branching storyline using variables and conditionals in the Twine engine.

Project link: <https://s-cb.github.io/Thesis/>

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**Process Analysis Statement:**

The senior year of a computer science student at Ball State University is spent working on one project: the Senior Capstone. For computer science majors who are also part of the Honors College, the Capstone and the Honors Thesis are typically combined, with the Thesis being a reflection of working on the Capstone. However, I knew I wanted to challenge myself and create a separate Thesis project that was not simply a summary of the Capstone. I wanted a way to incorporate both the technical skills I learned in my computer science classes and the humanities education I received through the Honors College to create something unique.

To combine both STEM and the humanities, I decided to create a text-based game for my Thesis creative project. I have been creating my own text-based games for over a decade now, and this hobby is what originally motivated me to study computer science. Thus, I thought creating a game would be a fitting end to my education at Ball State University. I found working on this project to be both challenging and personally fulfilling. I felt that I was sharpening many different skills in both the creative and technical areas, and the end product, *A Portrait of the Artist's Summer*, is something that I am proud of.

In my game, *A Portrait of the Artist's Summer*, the player controls Natalie, a high school senior who is spending a week at her formerly estranged sister's art conservation studio. Almost all gameplay is in the form of dialogue options, allowing the player to choose the direction that conversations between Natalie and her sister go. The story and dialogue changes based on decisions the player made previously, as well as if the sisters reconcile or not. Each dialogue option has an effect on the relationship between the sisters and based on this relationship value, dialogue options may be locked or unlocked, and certain scenes may change entirely. This allows for multiple playthroughs, each with different scenes and endings.

The first step in creating my game was to decide on a concept and storyline. I already had the basic idea of the story I wanted to write, which was the meeting between two siblings who had not seen each other in a very long time. I knew that I wanted one sibling to be older and successful, and the other to be just graduating high school and unsure of their plans. When reuniting, they are able to find common ground through their love of art. I also knew that I wanted these two characters to be the only people who had any dialogue, making the entire game simply a conversation between the two.

I also knew that I wanted to make at least one sibling female, and early in the planning process I decided to make *both* siblings female. I have been playing video games since I could hold the controller to my dad's SNES console, and one constant I have noticed through the entire time I have had this hobby is the lack of games that satisfactorily tell women's stories. I find it just as difficult now to find games with even a single well-written female character as I did over fifteen years ago. There is a serious lack of games with realistic female characters with their own narrative arc, and this influenced my decision to make both characters female. Using these ideas that I had, I was able to develop the concept for the entire game.

Once I had the concept developed, I decided what software I wanted to use to actually create the game. I chose to use Twine, a program created specifically for text-based games and other forms of interactive fiction. Out of the three programming languages created for Twine, I opted to use Harlowe. In addition to Harlowe, I also used HTML, JavaScript, and CSS to code my project. In order to do more complex story branching, I also used a third-party tool called tweego and the Visual Studio Code IDE.

Next, I planned the written portion of the story. I started by creating an overarching outline for the story, and then broke that outline down into specific scenes and created separate

outlines for each of those scenes. This way, I was able to plan each scene and interaction and how they affected each other in advance. Once the storyline was created, I started work on characterization. I am both a younger *and* older sister, so I was able to draw on these experiences to influence the characters. For the narrator, Natalie, I knew that I wanted to incorporate the sense of isolation and alienation that comes from the transition from high school to college. This was something I struggled with as a teenager, and something that my younger sister is currently struggling with, and so I used this to influence Natalie's character. When I was dealing with this alienation, I often had the irrational feeling that moving to a place where no one knew me and reinventing myself would solve my problems. To characterize the older sister, Mila, I drew on this desire. The difference, however, was that Mila *did* move away and reinvent herself. Mila's conflict comes from the dialectic between wanting to be a positive role model for her sister and wanting to live a completely separate life without any external factors.

To develop the voice of the characters, I did daily freewriting exercises through the entire time I was working on the project. This allowed me the freedom to experiment with narrative styles and writing scenes that may not have anything to do with the actual plotline. For example, I wrote 'diary entries' from the perspectives of both characters to develop their narrative voices and how they speak. I read books that Mila might have read in her college education, including various books by Susan Sontag, *Ways of Seeing* by John Berger, and *The Prince* by Niccolò Machiavelli, and used these to form her personal philosophy and manner of speaking.

When writing a scene, I would constantly refer to the outline to make sure that I was getting all the information I needed to for the next scene to occur. I would write a rough draft of one scene, including all dialogue options and story variations, and would implement gameplay later. By separating writing the story and adding gameplay into two separate steps, I was able to

avoid ‘burning out’. If I were not feeling particularly creative one day, I would code the game. If I were doing well with writing, I would finish multiple scenes at a time. If ever felt that I had ‘writer’s block’ and was unable to continue a scene, I would reread the books that I used for research or characterization or watch an episode of *Star Trek* that the characters watch in the game. I was able to draw inspiration from these sources, and this was often enough to propel the story forward.

The scenes where the characters are working in the studio were the most difficult to write, both creatively and technically. I am not a painter or art conservator, but I have always admired art and respected the amount of time and love that goes into creating a painting. I did plenty of research to make sure that the gameplay was realistic and the process was correct. I read the textbooks that are often assignment for art conservation courses and watched instructional videos. I was willing to spend as much time as needed on research because I felt that art was a large part of the story and glaring mistakes could ruin the immersion for the player. Coding these scenes was also time consuming. I had to keep track of the player’s answers and display different paragraphs based on the response, all within the same Twine paragraph. I also attempted to create a few JavaScript ‘minigames’ for these scenes but had to discard them due to constraints with time and the Harlowe language.

I had a few friends test the game throughout the development process. This ensured that the gameplay and dialogue flowed well and allowed me to catch any spelling or grammar mistakes early on. I was also able to discuss the story with them, brainstorm new ideas, and change certain elements that were not working. These discussions and the feedback I received on the characters actually influenced some narrative decisions that I made. When my testers commented that they wish they were able to say something in a particular scene, it helped me to

find different story opportunities that I had missed. When I write, I feel that I ‘am’ both characters. It was insightful to see the characters from a ‘third-person’ perspective, allowing me to better understand how each sibling would be perceived by the other within the game.

Overall, creating the game was a very satisfying and fulfilling experience. I am glad I chose this path instead of the usual Capstone reflection, because it allowed me to be creative in a way I usually have not been able to with my major. I was able to hone both my coding and creative writing skills while creating something that had a lot of personal meaning, which would have been impossible with a traditional computer science Thesis project.

**Thesis Content:**

The game itself is hosted on GitHub: <https://s-cb.github.io/Thesis/>



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