

Computer Animation Stage 2: Final Analysis & Deliverables

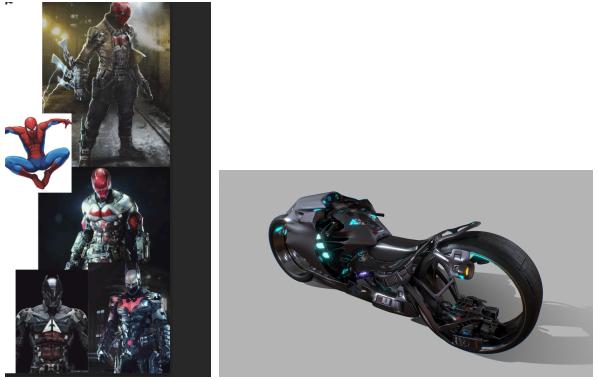
Critical Analysis: (Last Updated: Stage 1)

PART 1-Reference Video:

[The Batman Batcave Scene | The Batman \(2022\) - YouTube](#)

[Batman Arkham Knight "Suit Up" PC 1080p 60FPS - YouTube](#)

Brainstorming/References: (Last Updated: Stage 1)

<p>Character: Spyman</p> <p>Rough character designs and variations:</p> <p>We wanted to create a cool-looking character design. The character should have armor that looks cool while equipping it. We tried multiple color schemes to see which would fit our animation the best.</p>	 <p>SPYMAN Kishan Mohanakanth 2023-10-07</p>
<p>References for Spyman</p> <p>Multiple superhero suits, such as Spider-Man and Batman Beyond inspired us. We wanted to research heavy armored suits for our character, Spyman.</p> <p>Also, we needed a vehicle for our cutscene and decided on a cool futuristic bike. The first reference that came to mind was a bike inspired by Tron.</p>	
<p>Cutscene 3D model inspiration</p> <p>We liked this underground subway model for our cutscene. Spyman would look pretty cool riding through here on his bike so this was our inspiration.</p>	 <p>https://cdna.artstation.com/p/assets/images/images/035/737/622</p>

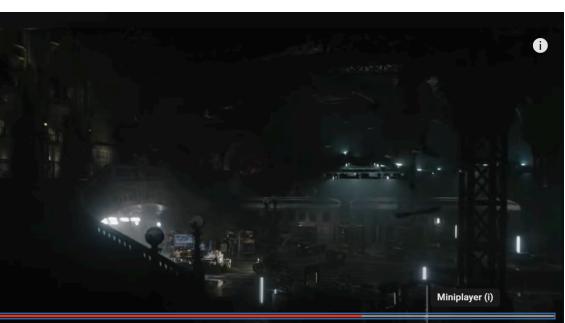
PART 2-Analyze Reference: (Last Updated: Stage 1)

Cutscene narrative: The character, Spyman, returns back to his abandoned subway base after fighting crime. His suit is damaged from all the crime-fighting and he rides his bike back to the charging point (the pressure plate). He then walks up to a suit capsule where he changes his outfit to a clean outfit.

First Video Analysis: [The Batman Batcave Scene | The Batman \(2022\) - YouTube](#)

(Last Updated: Stage 1)

Time Code	Image
1::05::1951	 A screenshot from a video showing a dark, atmospheric subway station platform. A bright, glowing circular light source is visible on the floor, likely a pressure plate. The background is mostly black, with some faint lights and structures visible through the darkness.
1::06::2013	 A screenshot from a video showing a dark, atmospheric subway station platform. A bright, glowing circular light source is visible on the floor, likely a pressure plate. The background is mostly black, with some faint lights and structures visible through the darkness.
1::07::2048	 A screenshot from a video showing a dark, atmospheric subway station platform. A bright, glowing circular light source is visible on the floor, likely a pressure plate. The background is mostly black, with some faint lights and structures visible through the darkness.

1::12::2204	
1::14::2275	
1::15:2288	

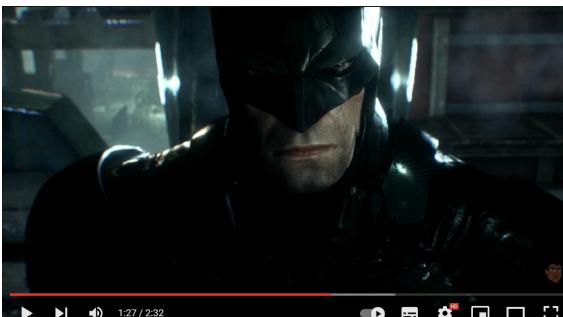
- Play
 - **Observe:** The first video reference we chose is the Batcave scene from 'The Batman'. Our first impression was to choose between frames 1951 to 2288 (1:05 - 1:15). We chose this scene because it was a simple camera tracking the locomotion of Batman's movement when he was driving his bike to the Batcave. Batman's movement from frames 2204 to 2288 eases out (goes from fast to slow)
- Concept
 - **Locomotion:** For this example, we had an idea for how to set up the camera movement for the cutscene, for the cutscene we would have different cameras tracking different angles of the environment.
 - **Animation principles:** We noticed some animation principles in this example are appeal, timing, and slow-in.

- Play: Critique
 - Between frames, 1951 to 2048 Batman drives fast when the doors to the Batcave open, (timing). Between frames 2204 and 2228, Batman slows in and turns to a complete stop before taking off his bike helmet (slow-in). When we get to see the environment we get to see the feeling of how the Batcave is, (appeal).
- Technical Data
 - When building this camera movement, it can be used to track down the character's movement. Scaling and changing the keyframes in the timeline, properly making the character and other objects. Changing the camera marker gives different angles for the cutscene.

Second Video Analysis: [Batman Arkham Knight "Suit Up" PC 1080p 60FPS - YouTube](#)

(Last Updated: Stage 1)

Time Code	Image
0::42::1280	
0::43::1314	

0::55::1687	
1::14::2180	
1::27::2650	

- Play
 - **Observe:** The Second video we chose for my reference is the ‘Suit up’ scene from Batman Arkham Knight. Our first impression was to choose between frames 1280 to 1314 and between 16817 to 2180 to 2650. We chose these frames because we wanted to make a suit-up scene and this was the first clip that came to mind.
- Concept
 - **Locomotion:** For this reference, we thought of making the camera pan from toe to head, the only difference is that the camera doesn’t move separately but moves together and smoothly.
 - **Animation principles:** A slow-in and slow-out animation for when Spyman scans his hand and for the camera (To show the textures and details of Spyman’s new suit).

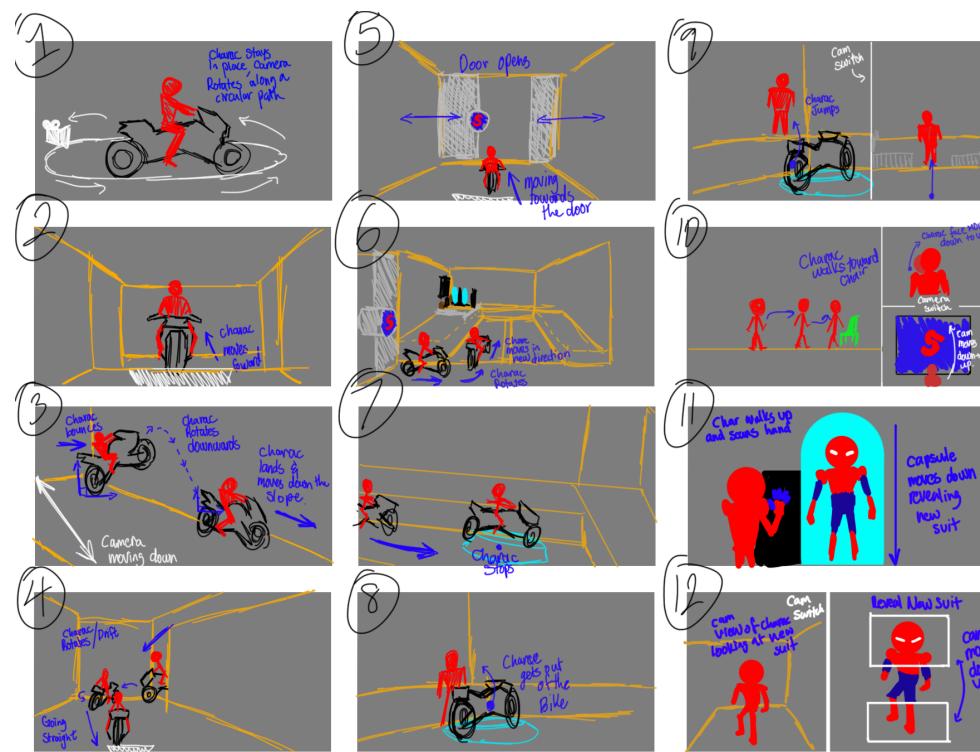
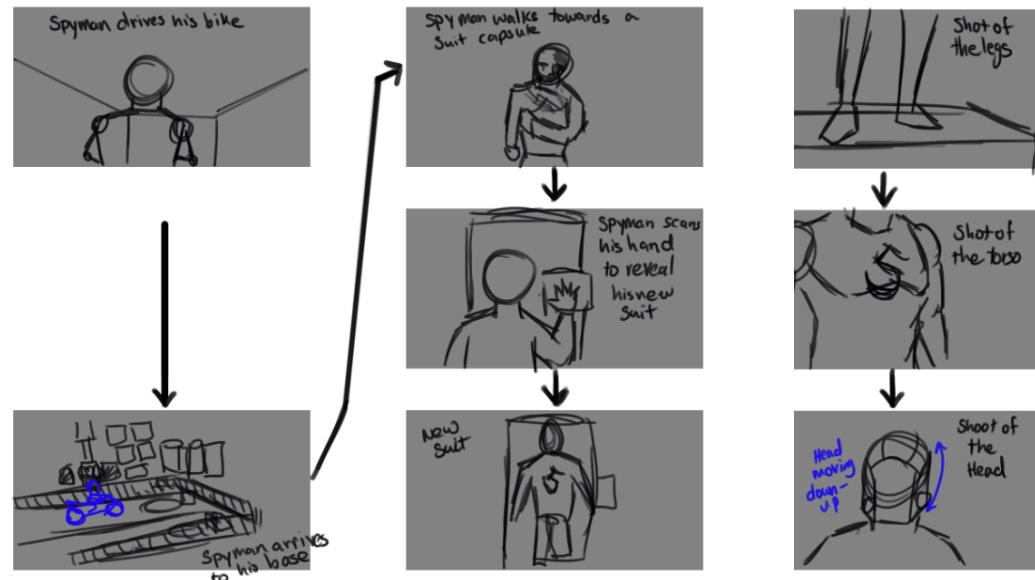
- Play: Critique

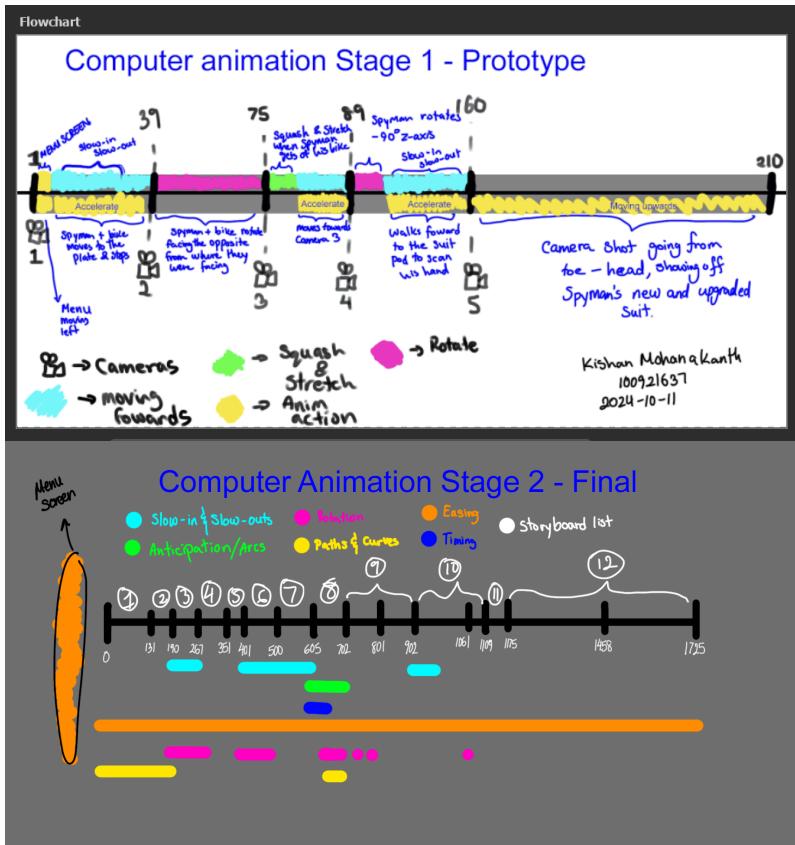
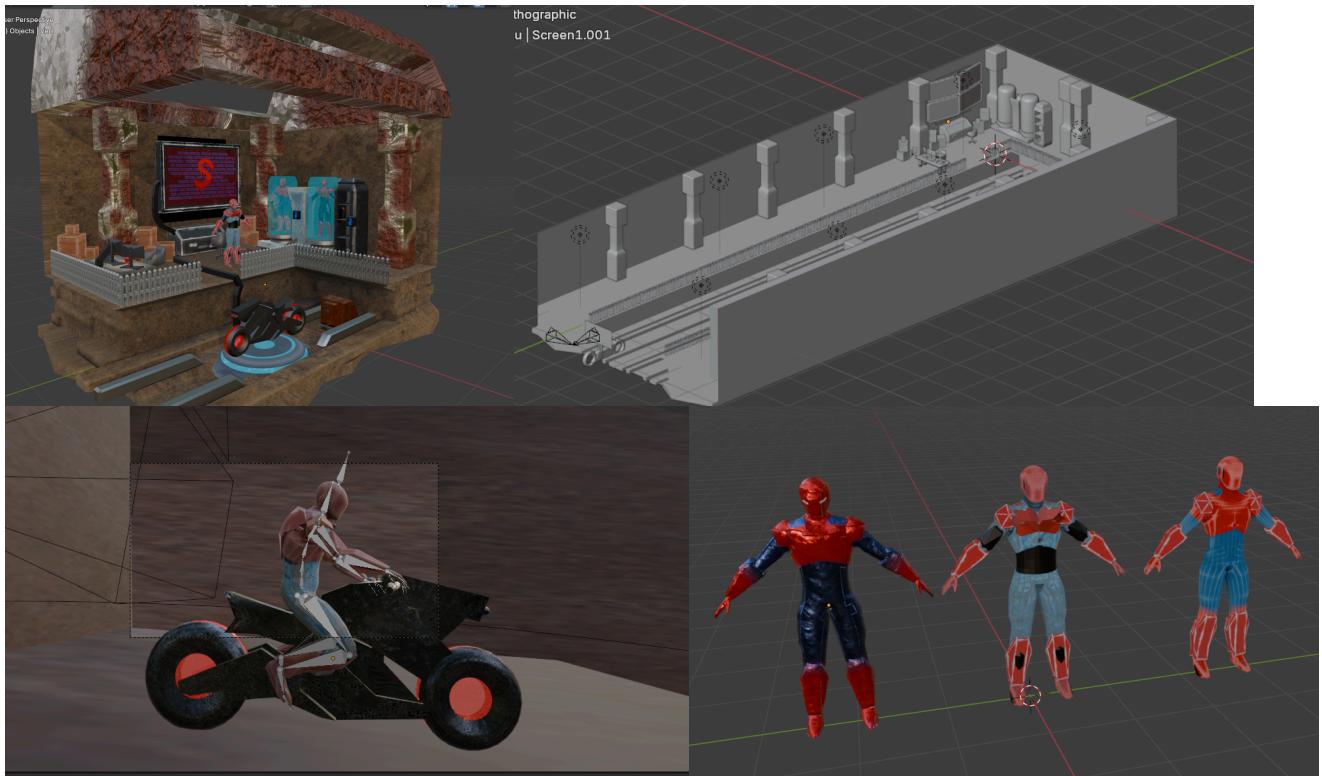
- Between frames 1280 to 1314 Batman has a slow-in and anticipation-like animation when he scans his hand and moves his hand away from the scanner. On frames 1687 to 2650 the camera shows different shots of Batman putting on his suit in a slow-in animation.

- Technical Data

- When building this scene, the player can slow-in towards the suit capsule, and an anticipation slow-in animation can play for when Spyman scans his hand and releases it. A slow-in animation for the camera can display Spyman's new suit.

Storyboard Planning (Photoshop): (Last Updated: Stage 2)



Flowchart (Photoshop): (Last Updated: Stage 2)**PART 3-Blender Scene/Character Prototype: (Last Updated: Stage 1)**

Spyman Menu Screen**Blender Progress Updates:** (Last Updated: Stage 2)

Blender Progress 1:

<https://drive.google.com/file/d/1KmWHJgLwb5nPmB6aLRdgnkCrB7MtMhcs/view?usp=sharing>

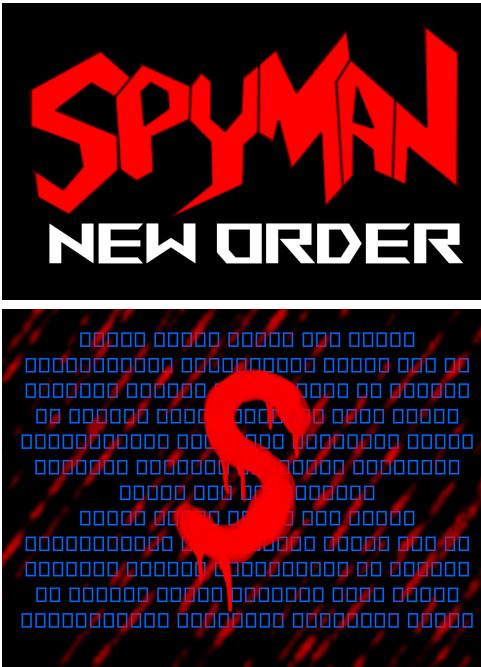
Blender Progress 2:

https://drive.google.com/file/d/1322Xo57Ldqo_qXAmQfflfXKwMYb7NrR/view?usp=sharing

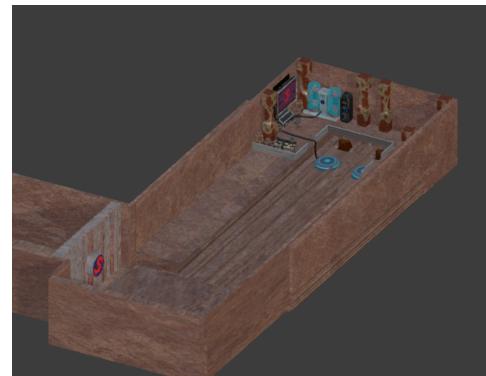
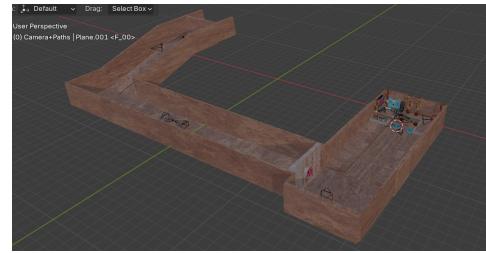
Blender Progress 3:

<https://drive.google.com/file/d/1KD1n8PEInhBd7e2Usy-V66gdwGygPpTU/view?usp=sharing>**All updates for Stage 2 submission (Blender and Unity):****Game Logos:**

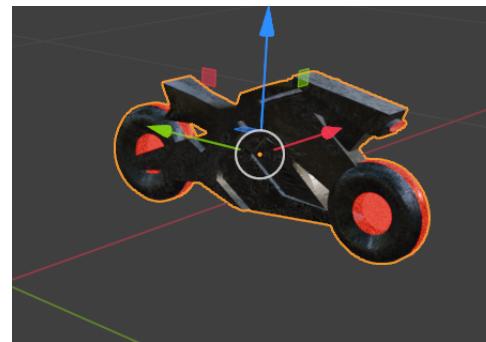
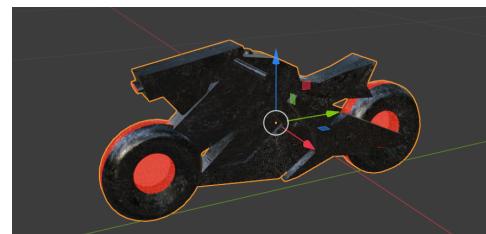
The previous menu screen from Stage 1 lacked color, textures, art, and animation. In Stage 1 it was just a fade-in animation on loop with the default Unity button with the assignment title. For this update, stage 2, we decided to model a character and environment, design a title for the cutscene as well as the UI buttons, and animation.

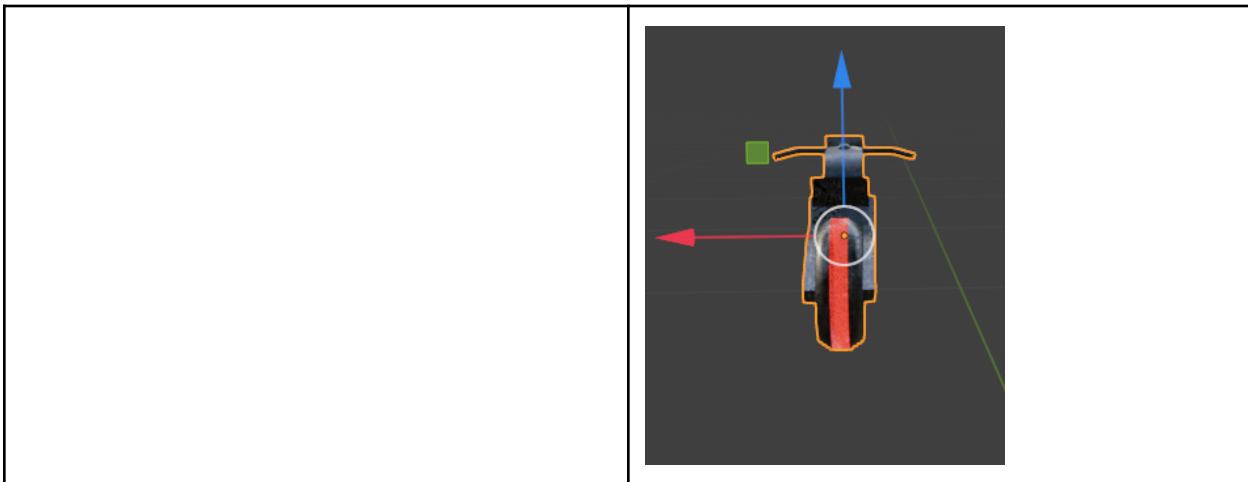


Updates for 3D Subway prefab model:
 Some changes were made for the underground subway model, we have extended the path giving it a more unique rotation for Spyman. We added details to the animation like metal doors opening when Spyman gets close to his base, TV screen textures, hand print models and textures, and different suits inside the capsule. The stage 1 model used blender colour materials, for this cutscene we added textures from 3D Coat and Adobe 3D Substance Painter



Updates for 3D Bike prefab model:
 The bike model looked too plain for the cutscene and did not give a natural appearance to a real motorbike. So we changed the model, added textures, and changed the emission of the red textures to give a glow effect to bring a sort of futuristic/high tech feeling.





PART 2-Re-creation and demonstrated in Game Engine: (Last Updated: Stage 2)

Analysis video (PART1.mp4):

<https://drive.google.com/file/d/1LzyJQlj0qk6BWGVkWinN4xW5faNkIuN3/view?usp=sharing>

Demo_Blender video (PART2.mp4):

<https://drive.google.com/file/d/1pSkBT-t7dwhz0yOixQtwcr0eF3gDpzfi/view?usp=sharing>

Demo_Engine video (PART3.mp4):

<https://drive.google.com/file/d/1ZTdyZZZX7tYswrP7cR8cOnB1N9g989I6/view?usp=sharing>