

FINAL YEAR PROJECT REPORT

**Developing Stylized Visual Worlds: Technical and Artistic Contributions in a 3D
animated Short Film Project "Mistakes in the Mist"**

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This Report Presented in Partial Fulfillment of the Requirements for the Degree
of Bachelor of Science in Multimedia and Creative Technology

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APPROVAL

This Project titled “Developing Stylized Visual Worlds: Technical and Artistic Contributions in a 3D animated Short Film Project "Mistakes in the Mist"”, submitted by Marjuk Fatha to the Department of Multimedia and Creative Technology, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Multimedia and Creative Technology and approved as to its style and contents. The presentation has been held on 20 August 2025.

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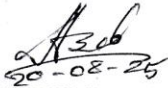
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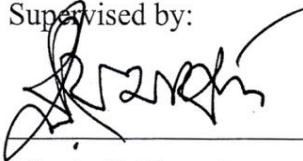
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I hereby declare that, I completed this project under the supervision of **Mr. Arif Ahmed**, Professor of Practice, Department of MCT Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

This report presents my individual contribution to the 3D animated short *Mistakes in the Mist*. I focused on building a small, stylized world that reads clearly at night and runs on student hardware. My work covered the story and mind-map, reference and asset gathering, prop modeling in Maya, UV unwrapping in RizomUV, interior layout for clear sightlines, a shot-based water simulation in RealFlow, and sound effects (SFX) editing in Premiere Pro. The method was practical and project-based: set a few simple rules (silhouette first, limited palette, clean UVs), keep scenes at real-world scale, use proxy colliders with sensible thickness, cache fluids per shot, and name files consistently to make hand-offs easy. The film's story about a five-year-old boy on a stormy night set clear visual targets readable shapes, soft reflections, and controlled mist—which guided all design and testing. I evaluated each step with quick checks: checker maps to remove stretching on hero props, playblasts to judge the creature's outline, and short listening passes to balance SFX and keep space for silence. Results show a steady rainy-night mood, a water creature that reads as water rather than jelly, and minimal SFX that guide attention without dialogue. Fixing axis and scale stabilized RealFlow Maya imports; light fog added depth without killing contrast; selective substeps improved stability while keeping times reasonable. The pipeline stayed within limits on a Ryzen 5 7600, RTX 3070, 16 GB RAM machine. The report discusses trade-offs between detail and silhouette, fog and contrast, and speed and accuracy, and ends with practical next steps: better wet-surface interaction, gentle surface breakup on the creature, smarter cache presets, and a small real-time preview path for faster reviews. Together these choices created a compact workflow that other students can repeat for stylized liquids and night interiors.

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CHAPTER 1

INTRODUCTION

“Mistakes in the Mist” is my final-year project: a 3D animated short film. On a rainy night, a five-year-old boy hears a crash outside. He looks through the window and sees a scary water monster peering into the neighbor’s house. Frightened, he stumbles over his toy car—vroom! and the sound makes the creature turn toward him. He rushes back to bed. Suddenly he wakes—it was only a dream! But in front of his bed, a watery shape moves. He squeezes his eyes shut. In the morning, his bed is wet. The film uses mist, rain, and water to express fear, confusion, and innocence without dialogue.

I wrote and organized the story and mind-map, gathered visual references and production assets, modeled key props, and performed UV unwrapping. I planned the interior layout and outside environment, built the water simulation for the monster, and designed and integrated SFX (sound effects). My goal was simple: create a small, stylized world that reads clearly, sustains tension, and runs on student hardware. I focused on strong silhouettes, controlled contrast, and restrained detail so the creature reads as water—not jelly—within a dark, indoor set. To keep scope manageable, I favored modular props, and lightweight simulations, balancing look with performance. The result is a cohesive pipeline that supports rapid iteration and consistent art direction, letting image and sound carry the story. I also handled shot planning and handoff notes to keep the small team aligned across layout, lighting, FX, and sound and music.

1.1 Background of the Study

Project overview- Mistakes in the Mist is a short 3D film set during heavy rain at night. The film uses mist, reflections, and soft light to show a child’s feelings. The water creature is not only a threat; it is also a picture of the boy’s fear and guilt. The story is simple, but the mood is strong and steady from start to finish.

Why stylization- I like the bold, graphic energy of Valorant and the painterly drama of Arcane. Those works proved to me that style can guide the eye and carry emotion. Stylization also helps when you don’t have a big render farm: you can simplify shapes, push silhouette and still get a clear read in dark scenes.

My focus- I aimed for three things:

- A readable, moody bedroom at night (clear shapes, simple paths of light).
- A water creature that looks like jelly not watery and stays visible in low light.

- Sparse SFX (vroom, glass, slosh, thunder) that support tension without noise.

1.2 Problem Statement

Student often struggle to bridge art and tech when the story needs complex effects in a dark indoor set.

- **Research:** I gathered references for a 5–7-year-old’s room (toys, scale, relatable items) and added small fear cues (posters, pictures and toys).
- **Topology:** Early prop meshes had too many loops; I fixed them with quick retopo.
- **UV:** UV-unwrapping needed cleaner seams and better packing; I studied cases and used checker maps until stretching was gone.
- **Simulation:** RealFlow → Maya scene came in misaligned at first; I solved it by checking scale, axis, and units, then re-caching.
- **SFX:** I had to pick the right pitch and direction so sounds feel motivated by the scene, not random.

1.3 Objectives of the Study

This study aims to explore the creative and technical aspects of producing a stylized animated short film. To guide the research and production process, the following key questions were developed:

A. Art goals

- Keep a coherent rainy-night mood with controlled light and mist.
- Make the boy and the water creature read clearly against the background.
- Use camera position, set layout, and prop placement to guide attention.
- Support suspense using minimal SFX placed with intent.

B. Technical goals

- Build a clean prop/UV standard (consistent texel feel, neat seams, efficient packing).
- Create a shot-based water simulation setup (scene scale checks, simple collision shells, stable meshing, per-shot caches).
- Set sim/render quality based on on-screen size to keep student PC times realistic.
- Set SFX (Sound Effects) with clear volume levels and basic placement: left/right, near/far.

1.4 Research Questions

- i. How can a stylized fluid (simulation + shading) still read as water in a dark bedroom?

- ii. What tools and techniques are most effective for creating stylized models and environments?
- iii. Which UV and prop rules help a painterly surface hold up on close shots?
- iv. What is the smallest, most useful SFX palette for a short that has no dialogue?
- v. Which naming and cache habits reduce rework across modeling, UV, sim, and sound?

1.5 Significance of the Study

This write-up gives a repeatable student workflow for a small, stylized world with a water-based antagonist. It's aimed at students, generalist 3D artists, and sound-curious artists who need to carry emotion with SFX instead of dialogue. It includes:

- **Pre-production:** story + mind-map, shot goals, look refs, simple budgets.
- **Art-tech Rules:** modular props, consistent texture sizes, shared texture sheets to keep style and speed.
- **Water creature:** right scale; cheaper versions for wide shots; simple tricks so it reads as water, not jelly.
- **Performance:** match simulation quality to on-screen size, test on a student PC.
- **Sound plan:** stepped loudness and left/right, near/far cues that pace tension.
- **Fix List:** what to do when flicker, noise, or unreadable silhouettes appear.
- **The through line:** trade accuracy for meaning and detail for clarity—so the short finishes on time and still feels rich.

1.6 Scope and Limitations

What I cover (my parts):

- Story + mind-mapping
- Reference and asset gathering (interior mood, key objects)
- Prop/object modeling and UV unwrapping
- Interior layout & environment setup
- Water creature simulation (setup, meshing hand-off)
- SFX creation and integration in the edit

What is outside my scope (team tasks):

- Character sculpting/retopo/texturing are documented in my teammate's report. (Md Imran Hosen)

- Rigging, animation, lighting, and final rendering are covered by my other teammate's write-up. (Md Maniruzzaman)

Limits I worked under:

Hardware limitations; no render farm.

Tight time window (course deadline).

Toolchain:

Autodesk Maya (model/layout), RizomUV (UVs), RealFlow 10 (fluids), Adobe Premiere Pro (SFX edit).

Support tools:

PureRef, Lightshot, Sticky Notes, Google Drive, and a Maya↔Rizom bridge.

1.7 Structure of the Report

- Chapter 1: Introduction — Background, problem, goals, research questions, significance, scope, and how the report is arranged.
- Chapter 2: Literature Review — Key work on stylized worlds, readable night interiors, stylized fluids, and SFX for suspense; notes the gaps students face.
- Chapter 3: Methodology — My workflow and tools (Maya, RizomUV, RealFlow 10, Premiere Pro); steps: story & mind-map, references/assets, prop modeling, UVs, interior/environment, water-monster simulation, and SFX; team steps only mentioned where they connect.
- Chapter 4: Project Implementation — What I built, with evidence: mind-maps, mood boards, prop wires, UV checker shots, interior blockout→final set, sim tests/meshes, and SFX cue choices.
- Chapter 5: Results and Discussion — Outcomes vs goals; readability of the water creature; key numbers (render time/frame, sim time & RAM, cache sizes); what worked and what didn't.
- Chapter 6: Challenges and Solutions — Issues and fixes: extra loops in models, UV seams/packing, RealFlow↔Maya scale/axis, mist vs contrast, SFX pitch/direction; notes time and hardware limits.
- Chapter 7: Conclusion and Recommendations — Main lessons and my contributions; next steps: smarter caches, stronger stylized water shader, better wet-surface interaction, and possible real-time previews.

- References & Appendices — Sources; asset/license table, UV policy and proofs, simulation logs, SFX cue sheet, and helpful node graphs/settings.

CHAPTER 2

LITERATURE REVIEW

Stylized rendering gives animation a way to lead with mood and story instead of strict realism. Many artists use design choices—shape, color, edge control, and light—to guide the eye and shape emotion. This is powerful in short films, where the style must connect fast. Most writing and videos focus on single steps (a shader trick, a sculpt pass, a lighting tip). Fewer sources explain the whole path from idea to final output, especially for students with limited time and hardware.

This report aims to fill that gap for a small, stylized world: props and UVs, interior layout, a readable water creature, and minimal SFX that carry the story.

2.1 Stylized Rendering in Animation

Stylized rendering means choosing artistic clarity over physical accuracy. It uses bold shapes, controlled palettes, and simple materials to support the story. Famous examples—like *Arcane*, *Orion and the Dark*, or game cinematics such as *Valorant*—show how design can make scenes readable even in low light.

Key ideas I follow:

The outline reads, the audience understands the moment. Limited palette. Edge cues. Rims, fog, and soft reflections separate layers without heavy detail. In *Mistakes in the Mist*, this approach guides every choice: a quiet bedroom, soft rain, and a creature that must look like water, not jelly.

2.2 Tools and Techniques in Modern Animation

Modern pipelines mix focused tools. I compared options and picked software that is fast for students and fits my tasks.

Why these tools

- **Maya 2024:** reliable for modeling, layout, and scene management.
- **RizomUV 2024:** faster, cleaner UV unwraps than Maya's built-in tools for my needs.
- **RealFlow 10:** simple fluid setup with per-shot caches and stable meshing.
- **Premiere Pro 2023/2025:** quick SFX editing, panning, and mix tweaks.
- **Support tools:** PureRef (references), Lightshot (grabs), Sticky Notes, Google Drive, Maya↔Rizom bridge.

Table 2.2.1 Software tools used in this project

Tool	Main function	Used here
Maya 2024	Modeling, layout, scene prep	Yes
RizomUV	UV unwrapping, packing	Yes
RealFlow	Water simulation, meshing, caches	Yes
Premiere Pro	SFX edit, panning, final sync	Yes
PureRef	Reference gathering	Yes
LightShot	Caapturing Screen Shot	Yes
Sticky Notes	Planning, CheckList, Reminder	Yes

Table 2.2.1 outlines the key tools and techniques commonly used in modern animation production. Each software plays a specialized role in the creative pipeline, from gathering reference, modeling to uv-wrapping, simulation, and sound editing. These tools support both technical efficiency and artistic flexibility in stylized projects.

Hardware :

CPU- Ryzen 5 7600, **GPU-** RTX 3070, **RAM-** 16 GB DDR5.

This is good for student work, but not a render farm, so I kept simulation to on-screen need.

2.3 Case Studies and Style References

Stylized animated films have become popular for their unique visual storytelling. One notable example is “Arcane” (TV series on NETFLIX). Painterly frames, strong rims, and depth haze. Helped me balance soft brush feel with sharp shapes in dark scenes.

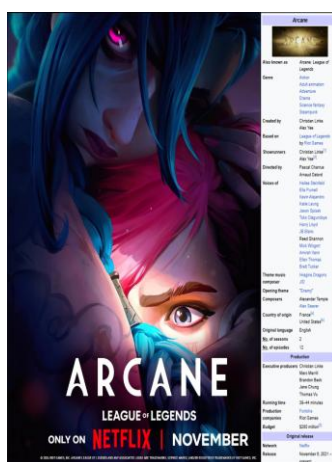


Figure 2.3.1 Visual style from "ARCANE" showcasing stylized rendering.

Another example is “Valorant” Dev. Riot Games(game cinematics). Graphic shapes and clear color accents. Showed how to keep action readable with simple materials.



Figure 2.3.2 Stylization examples from "Valorant".

3D Animated Film like “Orion and the Dark” 2024(Animated film). Night interiors with child-level framing, practical lights, and gentle fog. A direct guide for bedroom layout and palette.



Figure 2.3.3 Room setup of the boy from “Orion and the Dark”.

These films and game inspired the visual direction of “Mistakes in the Mist”, encouraging a creative blend of design and technology to produce a stylized short film that connects emotionally with viewers.

In addition, to support the look and workflow, I did focused study across motion, modeling/UVs, and sound:

- **Motion (Venom, film clips):** I studied Venom’s tendril flow and “living fluid” behavior to guide the creature’s movement. I needed believable, elastic motion cues; I kept the flow language but shifted the surface read to *water* (cooler tones, controlled refraction, cleaner highlights) so it didn’t look like jelly/slime.
- **Modeling & UVs (On Mars 3D tutorials):** My UV steps were simple: choose seams on purpose, keep texel density consistent, pack islands tight, and check with a checker. Result: sharper textures, faster lookdev, fewer fixes.
- **Sound & tension (LIGHTS ARE OFF / CGMeetup / ALTER shorts):** I analyzed how few, motivated sounds can carry mood. With no dialogue, SFX must hold emotion. I used stepped loudness, short room reverb indoors, longer tails for thunder outside, and simple left/right, near/far cues to guide attention and pace suspense.

2.4 Gaps in the Existing Literature

I found few end-to-end, student-level guides for stylized liquids in dark, indoor scenes. Most resources either review finished films or go deep on a single tool. There’s little on UV density for painterly looks, simple SFX plans for dialogue-free shorts, or how to keep iteration fast on mid-range hardware.

This project fills part of that gap with a practical, step-by-step example. It shows a small pipeline that links: clear prop/UV standards (consistent texel density, shared texture sheets), night-interior lighting and mist cues that protect contrast, a readable water simulation tuned to shot scale, and minimal, motivated SFX. It also includes checklists, LOD and caching tips, and a “match quality to on-screen size” rule so sims and renders stay affordable—aimed specifically at students working under tight time and hardware limits.

2.5 Summary

Stylized rendering favors clarity, emotion, and control. Works like Arcane, Valorant, and Orion and the Dark shaped my choices for shape, light, and fog. Venom informed motion ideas for a living fluid, while UV (On Mars 3D) and SFX lessons came from focused short animated films.

CHAPTER 3

METHODOLOGY

This project used a practical, project-based method focused on my lane in the pipeline. I started with the story and mind-map, then built reference boards for the child's room, rain, and mood. In production, I modeled key props in Maya and did UV unwrapping in RizomUV, set the interior layout for clear silhouettes, and created a shot-based water simulation in RealFlow. In post, I designed and placed SFX in Premiere Pro to support tension without dialogue. At every step I balanced style and performance so the work ran well on student hardware, using simple rules: silhouette first, limited palette, clean UVs, stable sims, and tidy caches. Peer feedback and self-checks guided small iterations until the look read clearly in dark, misty scenes. This hands-on approach gave me real experience running a compact stylized pipeline from idea to screen.

3.1 Research Approach

This project used a practice-based approach. I built the film world step by step, tested each part quickly, and changed things when it did not read well. The goal was not perfect realism. The goal was a clear, stylized look that serves the story and runs on student hardware. The work moved through three stages: pre-production (story and mind-map, reference boards, style notes), production (prop modeling, UVs, room layout, water simulation), and post (SFX edit and final sync). I kept the process simple: set real-world scale, use clean names and folders, cache fluids per shot, and write a short note after each test. I used fast checks to guide changes—checker maps for UVs, silhouette stills for readability, and short listening passes for sound. Peer feedback helped me cut extra detail and keep the focus on shape and mood. By repeating this loop—build, test, adjust—I kept the pipeline stable and finished shots on time.

3.2 Pipeline at a glance

I used a simple three-stage pipeline:

Pre-production: story + mind-map, references, style notes.

Production: prop modeling, UVs, interior layout, water simulation.

Post-production: SFX placement and final sync in the edit.

Team tasks such as character sculpt/retopo, rigging/animation, and lighting/final render were handled by my coursemates. I only touched those areas where my work connects (for example, making sure the simulated creature has clean caches for rendering).

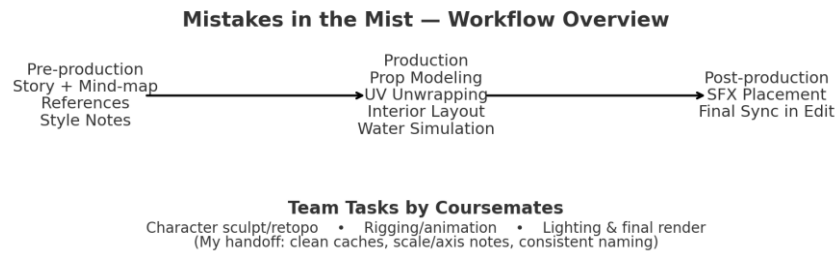


Figure 3.2.1 Production workflow of “Mistakes in the Mist” from Story Mind-Map to SFX.

3.3 Tools and Software Used

The production of “Mistakes in the Mist” relied on a carefully selected set of tools that supported both artistic expression and technical control, specifically within the scope of stylized 3D animation on student hardware. Each software was chosen based on its ability to handle specific tasks efficiently and reliably.

Autodesk Maya 2024 served as the main platform for 3D modeling, scene layout, and camera blocking. Its clean modeling environment, unit scale controls, and integration with RealFlow made it ideal for building assets and arranging shots in a way that supported stylized lighting and animation. All hero props and the interior set were modeled in Maya using quad-based topology and clean transforms for easy export.

For UV unwrapping, **RizomUV 2024** was used due to its fast packing tools, easy seam control, and real-time checker preview. This allowed for consistent texel density across assets and helped maintain a painterly surface treatment without distortion. Rizom’s bridge to Maya also sped up testing and revisions.

The water simulation—a core part of the short—was built using **RealFlow 10**. Its solver stability, per-shot caching system, and meshing tools allowed for smooth, readable creature forms that matched the film’s stylized tone. Proxy colliders, light forces, and scale-matched exports ensured compatibility with the Maya scene.

For sound editing, **Adobe Premiere Pro 2023/2025** was used to place and mix SFX, pan sounds based on camera movement, and align timing with the final edit. Its simple interface allowed quick adjustments without needing to switch platforms.

Support tools included **PureRef** for reference boards, Lightshot for captures, **Sticky Notes** for to-do lists, **Telegram** for backups, and a **Maya↔Rizom** bridge for faster testing.

All work was completed on a Ryzen 5 7600 CPU, RTX 3070 GPU, and 16 GB DDR5 RAM, which was enough to run all simulations and renders efficiently—as long as scenes were scoped to what appeared on screen. This setup reflects a balance between production goals and student-level resource limits, allowing a smooth workflow from concept to final output.

Table 3.3.1 Key software tools used in the film production pipeline.

Software	Purpose
Autodesk Maya 2024	3D modeling, scene layout, and camera blocking
RizomUV 2024	UV unwrapping, seam control, and efficient island packing
RealFlow 10	Water simulation, meshing, and per-shot fluid caching
Adobe Premiere Pro	SFX placement, timing sync, and final audio layering
PureRef	Reference board creation and visual organization
Lightshot	Quick screenshots for documentation and feedback sharing
Sticky Notes	Task tracking and workflow reminders
Google Drive and Telegram	Cloud storage, backups, and team file sharing
Maya↔Rizom Bridge	Seamless UV transfer and faster iteration between tools

Table 3.3.1 lists the main software applications used during the production of “Mistakes in the Mist”. Each software plays a specialized role in the creative pipeline, from gathering reference, modeling to uv-wrapping, simulation, and sound editing.

3.4 Project organization

Naming folders for organizing the files in order to find easily.

- Defense/preprod (story, mind-map, refs)
- Defense/assets (model, uv, export)
- Defense/simulation (shot folders with scene + caches)
- Defense/audio (wav, cue sheet, mixes)
- Defense/check (by shot, by pass)
- Defense/ref (references, notes)

3.5 Pre-production

Pre-production for *Mistakes in the Mist* followed a clear plan that balanced creativity with time and hardware limits. I drafted the story, from the approved draft I built a simple mind-map, which set what the audience should notice in each moment. The map also informed the room layout: a direct sightline from bed to window to the neighbor's house, and open space for the creature to approach the bed. I collected references for a five-year-old's room, rain and mist, and night palettes, and arranged them as PureRef boards by topic. Next, I sketched a room blueprint with rough dimensions and prop zones. Finally, I prepared a small Gantt chart to schedule modeling, UVs, water-simulation tests, and SFX so production stayed focused throughout.

3.5.1 Story

First I wrote a short version of the story about a five-year-old on a stormy night. We reviewed it as a team, cut ideas that were too heavy for our timeline, and locked a simple arc. I then mapped seven beats—wake, look out the window, see the creature, toy-car vroom, retreat to bed, false wake-up, wet morning. Each beat got a note about viewpoint, sound, and what the audience should notice. I planned sightlines so the boy, the window, and the neighbor's house connect in a single path. I also listed props that support the beats: toy car, bedside items, window frame. This gave me a tight plan for blocking, camera positions, and SFX cues.

3.5.2 References

I gathered visual references for a child's bedroom, toy scale, rain, mist, and night color palettes. Scenes from *Orion and the Dark* guided framing, practical lights, and gentle fog. I organized everything into PureRef boards by topic—room, props, water, mood—so I could make fast choices while modeling and laying out the set. I also drafted a simple room blueprint with rough dimensions and camera angles to keep proportions consistent across shots.

3.5.3 Style Notes

Two rules guided every decision. Silhouette first: big shapes must read in low light; small details stay secondary. Limited palette: cool night tones with a few warm accents from props or practical lights. Materials stay simple, with soft reflections and controlled highlights, so the creature reads as water, not jelly. A hint of mist adds depth without flattening contrast. These rules kept iteration fast and helped the team maintain a steady look.

3.6 Production

Production turned the plan into working shots. I kept the scene at real-world scale in meters and built only what the camera needed. Props were modeled cleanly, UVs were unwrapped with a simple, repeatable policy, the room was blocked for clear sightlines, and the water creature was simulated on a per-shot basis. I relied on small, consistent checks—clean file names, correct units, quick checker-map tests—so hand-offs to the team stayed smooth and fast on student hardware.

3.6.1 Prop Modeling (Maya)

I modeled the hero props—the bed, the window, and the toy car—plus a few light background items to support the scene. I aimed for quad-based topology, removed extra edge loops, and kept bevels simple so meshes stayed clean and efficient. Detail matched purpose: hero props received more care, while distant items stayed light. Before export I froze transforms, deleted history, centered pivots, and kept names tidy (for example, prop_toyCar_geo). Early tests showed some models were heavier than needed, so I did quick retopology to reduce counts and improve viewport speed.

3.6.2 UV Policy (RizomUV)

UVs followed four rules that I could apply quickly on every asset. I placed seams away from the main camera side and kept them out of shiny areas where highlights travel. I kept texel density consistent on hero props so surfaces looked even when lit. I packed islands tightly and straightened shells where it helped alignment. Each asset received a checker-map pass, and I re-unwrapped any area that stretched or warped. These habits produced clean surfaces and made look-dev or texture work—if needed—faster and safer.

3.6.3 Interior Layout and Environment (Maya)

I arranged the bedroom so the story reads at a glance. Blocking came first: the bed, the window, the view to the neighbor's house, and the main sightlines that connect them. Set dressing used small, reachable objects at a five-year-old's height so the space feels believable. The visual path window → neighbor → boy/bed was kept clear with simple camera positions and shape contrast. I added light fog planes only in the mid-background to suggest depth while protecting contrast in the foreground. I did not build final lighting; my goal was a layout where shapes read cleanly and the simulated creature has room to move.

3.6.4 Water Creature Simulation (RealFlow → Maya)

The aim was movement that feels like living water, not slime, while keeping a clear outline in a dark room. I matched scale and units between apps before export and used simple proxy colliders for the bed, floor, and window frame with a little thickness to prevent leaks. Emitters sat along the window path and near the bed, and forces stayed gentle to avoid explosive motion. For meshing, I tuned the voxel/radius for a smooth silhouette and applied light smoothing with feature preservation, avoiding sharp creases that look plastic. Caches were written per shot with versioned names, then brought back into Maya for layout checks and for the team's render pass. I aimed for cooler tones and clean highlights so the creature reads as water; final shading and lighting were handled by my teammate. The first import arrived misaligned, so I corrected axis and scale, re-exported, and re-cached the affected shots.

3.7 Post-Production

Post-production brought picture and sound together in a clean, simple way. Because the film has no dialogue, sound effects do a lot of the storytelling. I kept a small palette of cues and mixed them inside Premiere Pro, always checking how each sound supports what is on screen. Before the final export, I ran short passes to confirm that the creature reads clearly, that cuts feel smooth, and that levels stay steady from shot to shot.

3.7.1 Sound Effects (Premiere Pro)

I started by spotting the film from the story beats and made a short cue list: glass crack, toy-car vroom, water slosh, and thunder. Each sound was trimmed tightly to picture so it feels motivated by an action or a cut. I panned cues to follow the camera or the source on screen, used short room reverb for interior moments, and kept longer tails only for distant thunder. Layers were kept to a minimum so nothing fights the main action. For loudness, I matched levels by ear and meter, left headroom for peaks, and removed any sound that added noise without meaning.

3.7.2 Quality Checks

I ran quick checks after each pass to keep things stable. For image readability, I froze frames to confirm the creature's silhouette holds up against the room and that mist does not crush contrast. For simulation continuity, I reviewed playblasts to catch leaks, jitter, or broken edges before the render handoff. For sound, I soloed each cue to confirm it is clean, then mixed it in context to be sure it helps the story beat. I logged any notes and fixes in a text file inside the shot folder so the team could follow the changes.

3.7.3 Risk Management

Time and hardware were the main limits, so I used short, repeatable steps and cached fluids per shot. I matched simulation and render quality to what appears on screen and avoided full-scene sims. Dark scenes can be confusing, so I relied on layout and light fog planes to support edges and depth, then checked stills for a clear outline. To prevent file chaos, I used strict names and folders and avoided "final_final" versions.

3.7.4 Ethics and Licensing

All third-party assets and sounds came from allowed sources. I kept a small license table with links and usage notes so each item can be verified. All screenshots, graphs, and process images in later chapters are my own work unless stated otherwise.

CHAPTER 4

PROJECT IMPLEMENTATION

This chapter explains how I built my parts of *Mistakes in the Mist* using a clear, staged pipeline. I began with the story and mind-map, gathered references, and drafted a room blueprint with sightlines. In production, I modeled hero props (bed, window, toy car) in Maya 2024 with clean topology, unwrapped UVs in RizomUV 2024, and arranged the interior so the viewer reads window → neighbor → bed at a glance. The water creature was simulated per shot in RealFlow 10 at real-world scale using proxy colliders, gentle forces, and stable meshing so it reads as water, not jelly. Caches were brought back into Maya to check silhouette and timing before hand-off. In post, I placed and balanced SFX in Premiere Pro, keeping a minimal palette tied to on-screen actions. Team tasks—character sculpt/retopo, rigging/animation, lighting, and final rendering—were handled by my coursemates; I supplied clean assets, unit/scale notes, and ready caches.

4.1 Development of “Mistakes in the Mist”

The film grew from a simple idea: show fear, shame, and confusion through water in a quiet bedroom at night. Our story follows a five-year-old boy who hears a noise, sees a watery figure at the window, and later wakes to find his bed wet. We used a stylized look so mood and shape read clearly in low light.



Figure 4.1 Official poster of the short film “Mistakes in the Mist”

In pre-production I drafted the story, built a mind-map of the key beats, and assembled mood boards for the child’s room, toys, rain, mist, and night palettes. I sketched a simple room blueprint with sightlines. This plan guided where props sit, where the creature enters. I then

modeled the hero props (bed, window, toy car) in Maya and unwrapped UVs in RizomUV using a consistent policy so surfaces stay clean.

A major part of my work was the water-creature simulation. I set scale, proxy colliders, emitters, and forces in RealFlow, then meshed and cached per shot. Caches returned to Maya for timing and silhouette checks before hand-off. I also designed a minimal SFX layer (glass crack, toy-car vroom, water slosh, thunder) in Premiere Pro to support tension without dialogue. Character sculpt/retopology, texturing, animation, lighting, and final rendering were handled by my coursemates; my goal was to deliver clean assets and stable caches that support the stylized, emotional tone.

4.2 Pre-production

Pre-production set the visual and technical foundation. It set the direction and scope. I aligned with the team on goals and limits, outlined the tasks and timeline, and gathered the core references to guide look and mood. This is the high-level overview; the next sections detail the story decisions, layout planning, references, and style rules.

4.2.1 Story and team pass

First, I wrote a short version of the story. Then our team sat together and tweaked it. We cut ideas that did not fit our time, skills, or hardware. We kept the core mood and simplified the action so it would be achievable. After this pass, we locked the story and I moved into mind-mapping.

On steep hill paths, Aduli and the village women carry water pots to Kingchak Hill, because in the summer heat, every waterfall is dry; only an ancient spring remains. Aduli's mother warns that boys are forbidden there and those who enter never return—giants once lived there, which is why the spring still survives.

After five miles, they arrive. Birds chirp, butterflies dance. While others collect water, Aduli chases the butterflies and wanders into the forest. The air turns ominous; alone, she cries. The ground shakes, trees sway, and a mountain-sized, stone-like hand lifts her. She goes quiet and, trapped in the hand, sees the world from above. Evening falls as villagers search for her. The giant stops on a mountaintop.

Giant: Why are you crying? We fear humans. Once we cared for nature—waterfalls flowed and rivers spread from our gathering place. Then selfish people destroyed us, stripping forests and hills for roads and buildings. The Creator heard our cries; now you face drought, failed rains, and landslides.

Aduli: Is there any way to break the curse?

Giant: Yes—raise public awareness to protect the environment...

Aduli vows to do so when she grows up. The giant returns her to the village.

Figure 4.2.1 First draft version of the story

4.2.2 Mind-mapping

I mapped the film as clear beats: wake → window → scare → vroom → retreat → dream break →scare 2 → wet morning. This map became my checklist for what must be visible in each moment. It also told me where key sounds belong (glass, toy-car “vroom,” first water slosh, thunder). The beats guided staging: window and neighbor view for the scare, bed for the retreat and the reveal.

4.2.3 Room planning and layout

I designed the boy’s room . I took ideas from the Orion and the Dark bedroom scenes—low, child-level framing, simple practical lights, and gentle night palettes. I drew a top-down blueprint showing bed, window, the sightline to the neighbor’s house, and safe paths for the water creature’s movement.

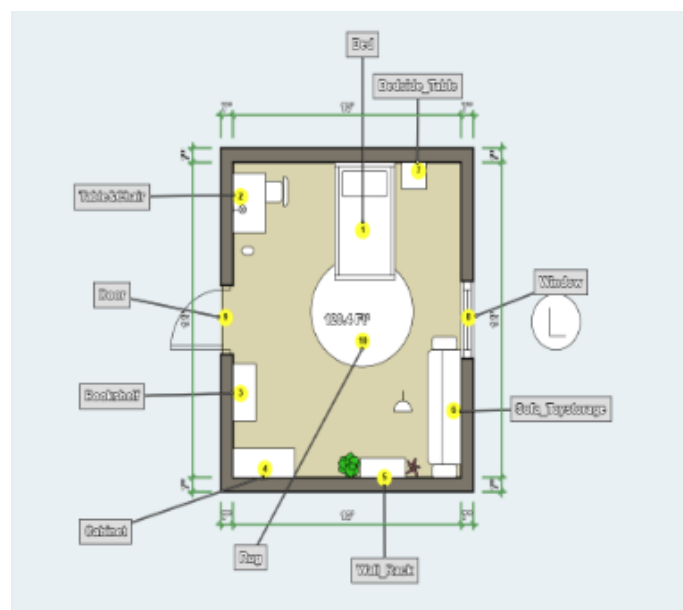


Figure 4.2.3 Room setup of the boy from “Orion and the Dark”.

4.2.4 Gathering references

I collected images for child room scale, toy types, rain/mist, and night palettes. I kept them in PureRef, grouped as: Room, Props, Water/Surface, and Mood. During production I checked these boards often to keep the look consistent.

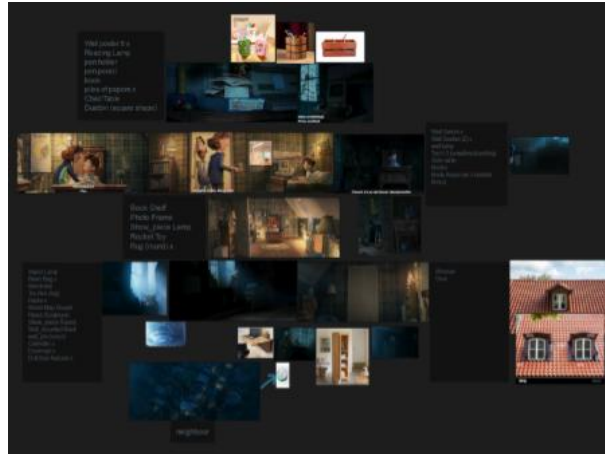


Figure 4.2.4.1 References gathering into one place.



Figure 4.2.4.2 Asset list for modelling.

4.2.5 Style notes

Silhouette first. Shapes must read in low light. I kept big forms simple and left space around the creature's outline. Limited palette. Mostly cool night tones with a few warm accents (lamp, wood, toy details). This kept the mood steady and avoided noisy color.

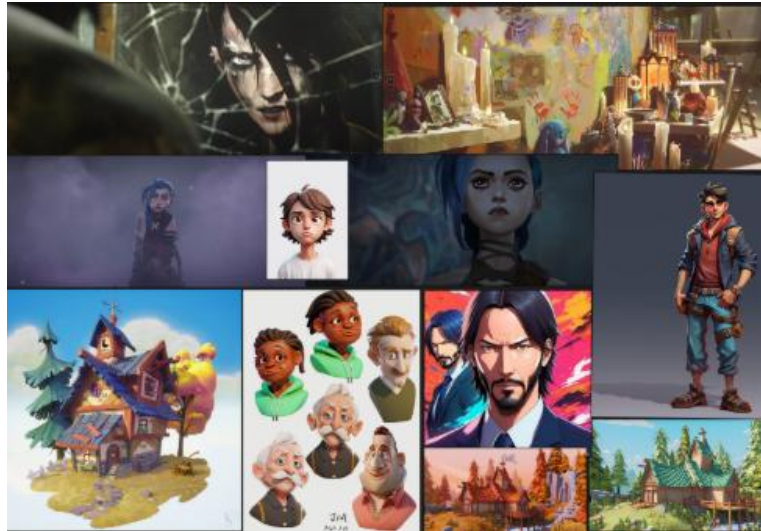


Figure 4.2.5 References for style notes of animation.

4.2.6 Planning tools

To stay on time, I made a small Gantt chart with weekly/monthly tasks for us (story/mind-map → modeling/characters → texture → animation/rigging → simulation → render → SFX/BG → Final Output). I also wrote short checklists for needed assets. These simple plans helped me finish each stage quickly and hand off clean files to the team.



Figure 4.2.6 Gantt Chart for our team.

4.3 Pre-production

In production, I modeled the hero props—the toy car, bed (with table), and window frame, room items at real-world scale in meters. Topology stayed clean, I removed extra edge loops, froze transforms, deleted history, and kept names tidy; heavy early meshes were retopologized. UVs were unwrapped in RizomUV to place seams away from the camera and shiny areas, keep texel density even on hero props, pack islands tight, straighten where helpful, and verify with a checker map until stretching vanished. The bedroom was laid out around three beats—window view, neighbor house, and bed—so the eye reads window → neighbor → boy; set dressing sat at a child’s height, with light mid-background fog for depth.

The water creature was simulated per shot in RealFlow, using proxy colliders, gentle forces, minimal substeps, smooth meshing, playblast checks, versioned caches, and an axis/scale fix on first import before hand-off for lighting and render.

4.3.1 Prop modeling (Maya)

I modeled the key objects that sit close to camera: the toy car, the bed (with side table), the window frame, and a small set of room items such as books, boxes, and simple toys. Everything was built at real-world scale in meters, with clean quad-based topology, simple bevels, and only the detail needed for the shot. Hero props received more care, while distant items stayed light so scenes remained responsive. Before export I froze transforms, deleted history, centered pivots, and kept names tidy (for example, prop_toyCar_geo). Early tests showed a few meshes had extra loops, so I retopologized them to reduce counts and avoid slowdown.

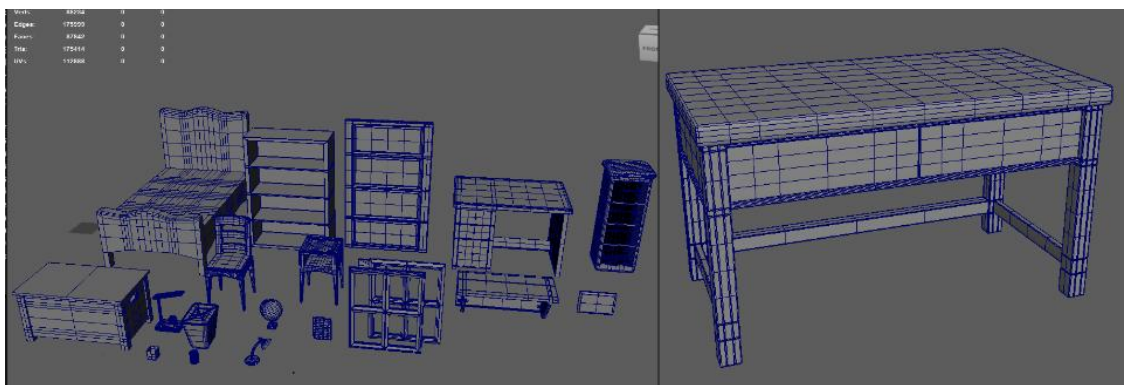


Figure 4.3.1 Assets for the room setup.

4.3.2 UV unwrapping (RizomUV)

UVs followed a simple, repeatable policy. I placed seams away from the main camera side and kept them out of shiny areas where highlights travel. Texel density stayed consistent on hero props so surfaces looked even when lit. Islands were packed tightly, with straightened shells where it helped alignment. Each asset received a checker-map pass; any stretching or warping was fixed before moving on. This produced neat surfaces and a stable base if further look-dev or texture work was needed.

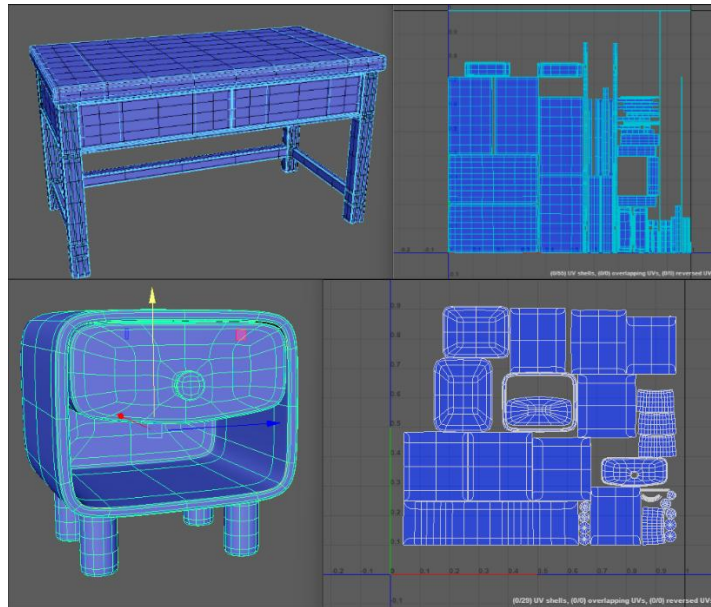


Figure 4.3.2 UV map of the models

4.3.3 Interior layout and environment (Maya)

I modeled the whole bedroom interior from our asset list, then adjusted it during layout—adding a few useful props and skipping ones that cluttered shots or didn't help the action. I also designed the environment outside the window (neighbor's house, yard, and trees). For the trees I used SpeedTree software to generate randomized models and then tweaked settings like trunk/branch density, leaf size, wind, and LOD to fit the stylized look and keep the scene manageable. I placed items at a child's height and left clear space for the creature's path. I used a little fog for depth. I didn't handle final lighting; my goal was clean shapes and readable staging.

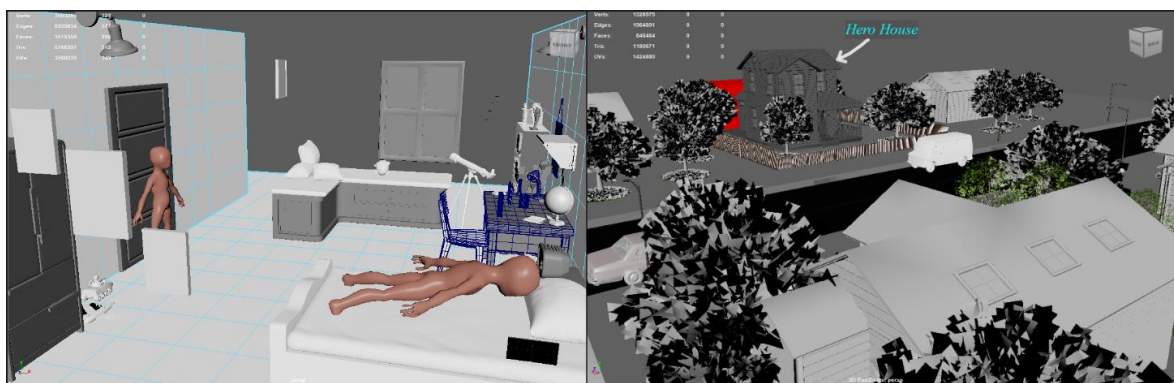


Figure 4.3.3 Interior Design (Left) & Environment Design (Right)

4.3.4 Water creature: simulation setup (RealFlow → Maya)

The target was motion that feels like living water, not slime, while keeping a clear outline in a dark room. I matched scale and units between apps and used simple proxy colliders for the bed, floor, and window frame with a little thickness to prevent leaks. Emitters sat along the window path and near the bed, with gentle forces to avoid bursts. I began with low substeps and raised them only on shots that showed tearing or jitter. For meshing, I tuned the voxel/radius for a smooth silhouette and applied light smoothing with feature preservation, avoiding sharp creases that read as plastic. Caches were written per shot with versioned names, then brought back into Maya for timing and silhouette checks before hand-off. The first import arrived misaligned; I corrected axis and scale, re-exported, and re-cached.

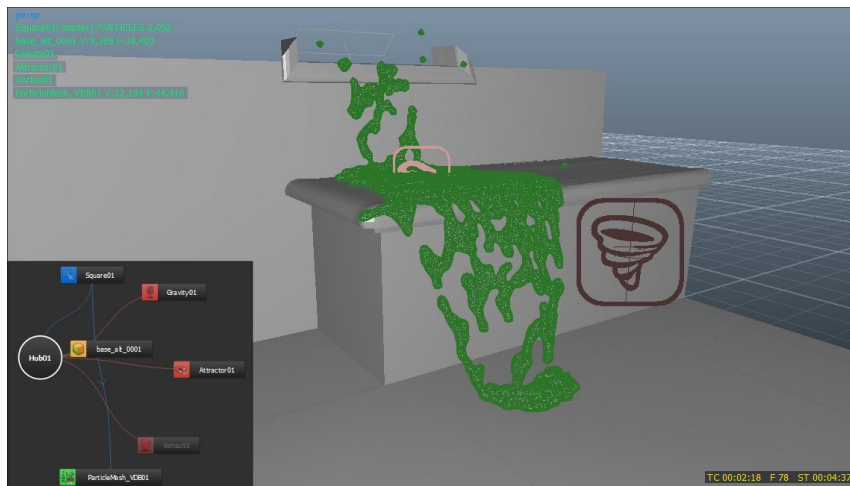


Figure 4.3.4.1 Water Monster (Particle) Simulation in REALFLOW

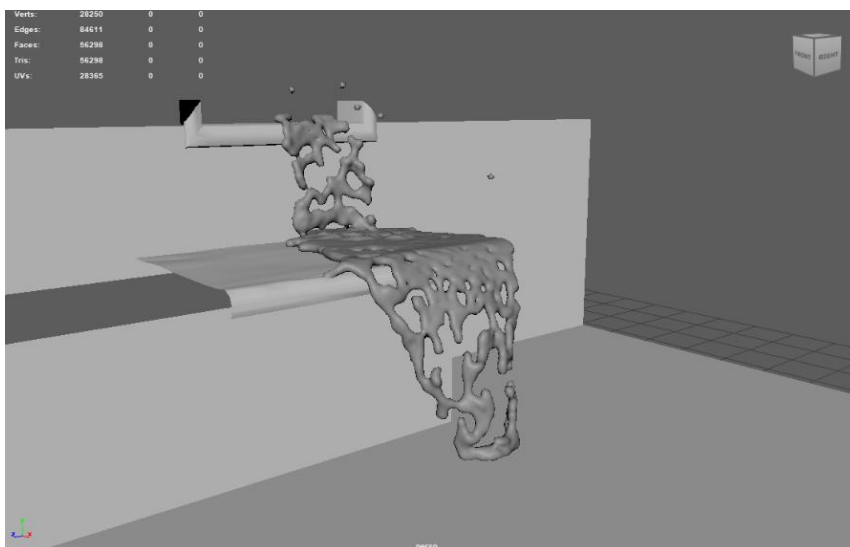


Figure 4.3.4.2 Water Monster (Mesh) simulation in Maya

4.3.5 Collaboration & Handoff

I shared assets and caches with clear names and folders so the team could pick them up without confusion. Models were exported as `propName_v###.fbx`, simulation caches as `sim_sh##_water_v###.bin`, and scene files as `shot##_desc_v###.mb`. Each shot folder included a short note about units/scale and any recent changes, which made animation, lighting, and final render hand-offs smooth. We also used a Telegram group as the central place to share files and updates. I posted new versions with a short message (what changed and where the file lives) so teammates could quickly find what they needed. If anyone required an item from another member, they could request it in the chat and grab the correct version immediately. This simple system kept everyone in sync and reduced back-and-forth.



Figure 4.3.5 Telegram group for file sharing and storing data

4.4 Post-production

Post-production brought picture and sound together with a small, focused SFX plan. I spotted the film from the story beats; glass crack, toy-car vroom, water slosh, thunder etc. Each sound was chosen to mark a clear moment and support the mood without adding clutter.

4.4.1 Sound Design

I cut every cue tight to the on-screen action so it feels motivated. Panning follows the camera or the visible source, which helps the space feel real. Indoors I used a short room reverb to

keep sounds close and controlled; distant or exterior moments (like thunder) used longer tails to suggest depth beyond the window.

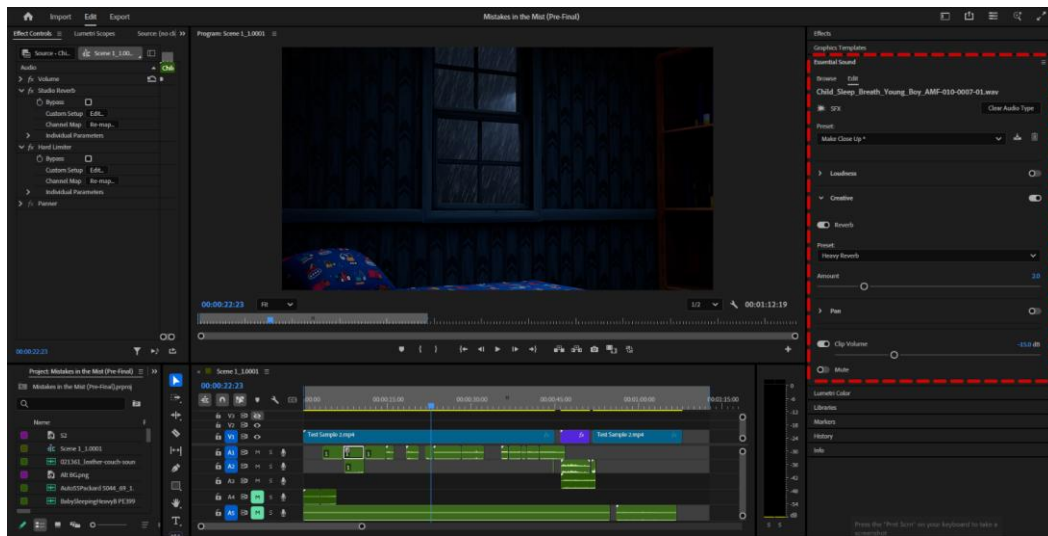


Figure 4.4.1 Sound editing placement in Adobe Premiere Pro.

For the mix, I kept loudness consistent from shot to shot. If a cue added noise but no meaning, I removed it. Short pockets of silence were used before big hits to sharpen impact. The result is a simple, readable sound that carries tension without dialogue.

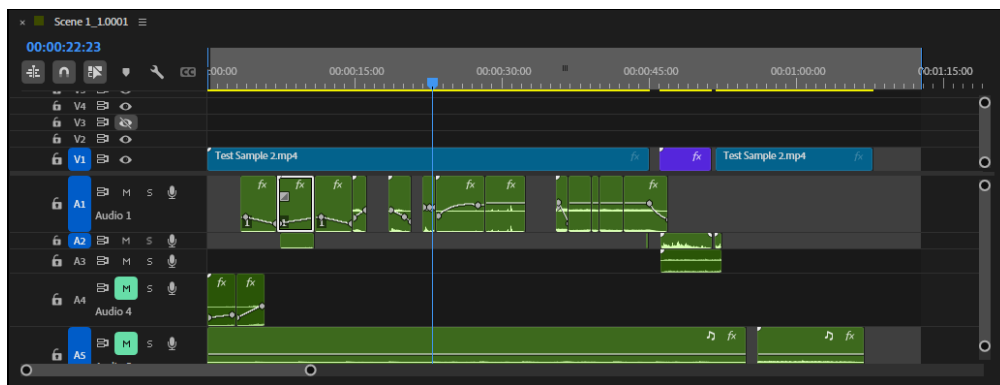


Figure 4.4.2 Sound editing timeline in Adobe Premiere Pro.

4.5 Iteration and Fixes

After testing, I made targeted changes to keep the picture clear. On hero props, I removed extra edge loops so meshes were lighter and cleaner. In UVs, I moved seams away from specular areas and repacked islands for better space use, which stopped small highlight breaks. For the water sims, I raised substeps only on shots that showed jitter and left others at

lighter settings. In sound, I trimmed layers so each story beat was easy to hear. Peer feedback helped me keep the creature readable and the room uncluttered.

4.6 Summary

This chapter showed how I built the film's foundation: clean props and UVs, a readable night bedroom, a stable water creature that **reads as water**, and a minimal SFX plan tied to on-screen action. Clear naming, versioned caches, and small checklists kept production organized and made team hand-offs easy. The result is a consistent, stylized world that supports the story from first beat to final frame.

CHAPTER 5

RESULTS AND DISCUSSION

The finished short, *Mistakes in the Mist*, delivers the mood and clarity we aimed for with a stylized approach. Night interiors stay readable even in low light, and the water creature feels like water (not jelly) thanks to smooth meshing and careful staging. A small set of sound cues carries tension without dialogue, letting silence do part of the work. Clean prop models and consistent UVs hold up in close shots, while a simple room layout guides the eye window → neighbor → bed so viewers always know where to look. Light mist adds depth but does not hide action, keeping contrast where it matters. Together, these choices create a quiet, dreamlike tone that matches the story's mix of fear, shame, and confusion, and they stay consistent from the first frame to the last.

5.1 Final Output Overview

The film follows a five-year-old boy on a rainy night as he notices a shifting, water-like presence near the window. From early planning to the final edit, the art direction stayed focused on silhouette and mood. Hero props—the bed, the window, and the toy car—were built for close readability, and the bedroom plus the outside view were arranged to give clean sightlines into the neighbor's space. The creature was simulated per shot and checked in Maya so its outline stayed smooth against dark backgrounds and never collapsed into noise. Soft reflections on surfaces, controlled highlights on wet areas, and gentle fog kept the look coherent across shots. Sound was sparse: glass crack, toy-car vroom, water slosh, and thunder. Each cue was cut tight to picture and mixed to support the pacing from quiet to tense to quiet again, strengthening the film's rhythm without drawing attention to itself.

5.2 Evaluation of the Stylized Choices

Stylization worked because it put readability first. Large shapes read at a glance, and the limited palette—cool night tones with a few warm accents—kept frames calm and focused while still giving the eye landmarks. The water creature's motion is smooth, cohesive, and slightly elastic; once meshed and placed in the scene, it feels alive but still watery, especially when highlights travel across the surface. Consistent UVs prevented small surface artifacts on hero props that could have distracted from the story, and the interior layout left clear space for the creature to move without crossing clutter or competing details. The minimal SFX plan proved effective too: a few well-placed sounds said more than a dense sound bed, and

pockets of silence before key hits raised tension naturally. Overall, choices in shape, color, staging, and sound aligned with the emotional goals and helped the audience follow each beat.

5.3 Comparison with Initial Goals

Our initial goals were to hold a steady rainy-night mood, keep the creature readable at all times, use per-shot simulations sized to the frame, and support story beats with minimal SFX. The final film meets these aims. The visual path window → neighbor → bed is clear in every sequence, and the creature maintains a clean silhouette once the axis/units import issue was fixed. Caches imported reliably and allowed fast checks before hand-off. Scope adjustments during production—removing extra mesh loops on hero props, moving UV seams out of specular paths, and tuning mist levels—improved clarity without changing the vision. If needed, future work could add subtle wet-surface contact or safe surface breakup on the creature, but the current balance already serves the story well and keeps the flow of shots smooth.

5.4 Feedback and Peer Review

Peer comments helped refine key moments and confirmed the direction. Early notes asked for a stronger outline on the creature near the window; small changes to layout and simulation settings fixed that without raising render or sim cost. Feedback on fog density led to lowering mid-foreground haze to protect contrast and keep the boy and creature easy to read. Classmates also flagged timing around the vroom cue and the first water slosh; trimming those sounds made the beats land better and cleaned up the rhythm of tension and release. Wireframe and UV checks from peers caught a few heavy meshes and visible seams, which were corrected before the final hand-off. Across reviews, viewers reported that the mood, readability, and sound choices communicated the intended emotion, and that the stylized approach supported the story instead of competing with it.

CHAPTER 6

CHALLENGES AND SOLUTIONS

This chapter lays out the main problems I faced and how I fixed them across modeling/UVs, water simulation, interior readability, sound, time limits, and team hand-offs. It reviews how well the stylized approach held up under pressure, where constraints forced trade-offs, and the small, repeatable loops I used to break creative blocks. The chapter also captures what this project adds to clear visual storytelling—clean silhouettes, simple SFX, and readable staging—and points to practical upgrades for next time, such as better wet-surface contact, safe surface breakup, and light automation. It closes with the key lessons that will guide future work.

6.1 Modeling and UVs

Early hero props carried extra edge loops, which raised counts and slowed viewports. I retopologized the toy car, bed, and window, keeping quads where helpful and removing hidden loops, then froze transforms and cleaned pivots/names. UV issues also surfaced: seams sat in shiny areas and checker maps showed stretching in close shots. I moved seams off specular paths, straightened key shells, and repacked islands in RizomUV until the checker pattern looked even. The takeaway is simple: a small UV policy—hide seams from camera, keep a steady texel feel—prevents later fixes and keeps surfaces clean.

6.2 Interior Layout and Readability

Too much mist flattened depth and reduced contrast. I limited fog to the mid-background and checked silhouettes on still frames, keeping the foreground clearer so shapes pop. Extra set dressing also stole attention from the window-to-bed path. I removed small items, kept props at a five-year-old's height, and let big shapes guide the eye window → neighbor → bed. If the outline reads, the scene reads; everything else is secondary.

6.3 Water Simulation (RealFlow → Maya)

The first cache arrived off-scale and slightly rotated. I matched units and axis in both apps, re-exported, and re-cached per shot, keeping a short checklist (meters, world up, collider thickness). Some shots showed jitter and tearing at low substeps; I raised substeps only where needed and kept forces gentle. When meshes looked “jelly-like,” I tuned meshing radius and smoothing to protect a clean silhouette and avoided noisy micro ripples. Versioned, per-shot

caches made it easy to change one variable at a time—scale, then stability, then silhouette—without breaking the rest.

6.4 Sound Effects (SFX)

Stacked layers blurred key moments, so I reduced the palette to four cues—glass crack, toy-car vroom, water slosh, and thunder. Indoors I used short room reverb; distant thunder kept longer tails. Simple L/R pans followed the camera rather than showing off. Level jumps between shots were fixed by matching integrated loudness in Premiere Pro, leaving headroom for peaks and deleting any sound that added noise without meaning. Silence became part of the design: one clear cue beat five muddy ones.

6.5 Time and Hardware Limits

With a Ryzen 5 7600, RTX 3070, and 16 GB DDR5, the plan had to fit the machine. I matched sim and render quality to on-screen size, raised detail only on hero shots, kept scenes light, avoided full-room sims, and reused stable settings. “Good and clear now” proved better than “perfect but late.”

6.6 What Remains to Improve

File management: I can add light automation for naming and folders, so scenes, caches, and exports follow one pattern every time. A small “shot README” in each folder and a weekly backup routine (local + cloud/Telegram link) would make hand-offs even safer.

Simulation: To get smoother transitions for the water creature across shots, I’ll start each new shot from the final state of the previous sim and run a short pre-roll (12–24 frames) so the fluid settles before action. I’ll keep voxel/radius, substeps, smoothing, emitters, and random seeds consistent across adjoining shots, and use slightly thicker proxy colliders to prevent edge pops. A small viscosity/surface-tension tweak will reduce snapping without making the creature heavy, while velocity-based motion blur and 4–6 frames of overlap at cuts (with a light audio crossfade) will help the eye and ear bridge edits. A quick cut-continuity check—side-by-side stills for silhouette, highlight direction, and size—will flag any jumps so I can re-cache just that window with matched settings.

SFX: I can add tiny cues for micro-moves (fabric rustle, window rattle) and keep one loudness target across shots. Simple automation lanes for pan and reverb would make space feel clearer. Where possible, replace generic library clips with short foley takes to match the picture exactly.

6.7 Summary

Most issues traced back to scale, seams, stability, and clutter. I solved them with small, repeatable steps: clean topology, a clear UV policy, per-shot caches with proper units, lighter fog, and minimal SFX. The result is a stylized world that stays readable and stable, ready for final presentation and future refinements.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

This project set out to build a small, stylized world that stays readable at night and tells its story without dialogue—and it did. I handled the story and mind-map, gathered references, modeled the props, unwrapped UVs, laid out the interior, ran a shot-based water simulation, and cut the SFX. Together, these choices created a quiet, dreamlike tone that fits the film’s themes.

A few lessons stood out. “Silhouette first” works—clear shapes are stronger than tiny details in dark scenes. A simple UV rule set (good seams, steady texel density, tight packing) prevents headaches later and keeps hero props clean in close-ups. Clear, per-shot caches with consistent names make changes fast and team hand-offs easy. Light mist adds depth, but too much kills contrast. And for sound, fewer, motivated cues beat many thin layers; short room reverb indoors and longer tails outdoors keep the space believable.

Limits helped shape the work. With a fixed schedule and finite compute, quality had to match what the camera actually sees. Without dialogue, mood and SFX carried the emotion, so timing and placement mattered more than quantity. These constraints pushed me toward readable staging, tidy caches, and small rules that hold across shots.

Next steps focus on polish and speed: add gentle wet-surface contact (puddles, drips, sheet flow), try a subtle surface-breakup layer that keeps the silhouette clean, and use contact shadows/specular control to separate the creature from the sheets. In the pipeline, script auto-naming for caches and scenes, save a small preset pack, and keep a simple checklist for units/scale, seams, cache paths, silhouette stills, and SFX levels. For sound, add light fabric rustle and window rattle where it helps, keep “silence pockets” before big hits, and test timing in a quick real-time preview.

The core idea is simple: clarity over complexity. This project shows how a solid concept, careful planning, and focused stylization can deliver real emotion on a small production. It’s a practical reference for students and new artists—and a reminder that smart limits can sharpen the story.

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APPENDICES

You can find storyboards, concept art, character designs, software workflows, sound bits, and rendering examples in the appendix. For everything, check out this link:

[Appendices Materials – <https://drive.google.com/drive/folders/1i7j1TD0NtGcMsxfuu8zpQ-3UuUq4bv30?usp=sharing>]

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