Adopt Me: An interactive video game to encourage people to adopt animals from shelters

Ying Xing
yx9516@rit.edu

Follow this and additional works at: https://scholarworks.rit.edu/theses

Recommended Citation
Adopt Me

An interactive video game to encourage people to adopt animals from shelters

Ying Xing
yx9516@rit.edu

A Thesis Submitted in Partial Fulfillment of the requirements
For the Degree of Master of Fine Art in Visual Communication Design

Rochester Institute of Technology
School of Design
College of Imaging Arts and Sciences
Visual Communication Design
Rochester, NY
December 10, 2019
Committee Members

Chief Advisor
Adam Smith
School of Design, College of Imaging Arts and Sciences

Associate Advisor
Chris Jackson
School of Design, College of Imaging Arts and Sciences

Associate Advisor
Jason Arena
School of Design, College of Imaging Arts and Sciences
# Table of Contents

4 Abstract

5-7 Introduction
   5 Introduction
   6 Situation Analysis
   7 Problem Statement

8-15 Design Process
   8 Design Concept
   9 Target Audience
   10 Design Inspiration
   12 Logo Design
   13 Design Ideation
   15 Project Deliverables

17-43 Design solution
   17 Design part 1: Customize
   21 Design part 2: Motions
   33 Design part 3: Games
   36 Design part 4: Selection
   39 Design conclusions
   40 Technical problem and solving
   41 User Research and Testing
   43 Future Iteration

44 Conclusion

56 References
Abstract

People buy pets and use their imagination in envisioning how their pet will ideally be, not the reality of raising a pet. More and more pets are abandoned by their owners for various reasons and the stray animals often cause accidents. But people keep purchasing animals from puppy mill stores. That is the main reason why the number of animals taken into shelters is increasing, along with the rate of euthanization. These factors are of interest for people who care about animals.

To address this problem, research was focused on the reasons why people abandon their pet and the factors will influence people choosing a new pet. Additionally, special attention was paid to the relationship between gamification and persuasion. The use of color, storytelling, and digital imaging skills were applied to the final visual design.

In order to raise awareness of taking care of pets and understanding how simple actions can significantly change animals’ lives, an interactive animation game, a virtual shelter, illustrates the miserable experiences that animals endure being sent to a shelter. Users learn why pets are abandoned and how to help them in various situations. Moreover, the user can get a recommended pet based on their real situations, such as family structure, condition, housing type, and personalities.

The prototype for Adopt Me was created through motion graphics. User testing proved the application prototype to be successful. To help more people find their dream pet, Adopt Me will add more connections and functions with real shelter in the future.

Keyword

Interaction game, Adoption, Shelter, Animation, Animals protect
**Introduction**

With the rapid development of society, people’s quality of living is also rising. With the spare cash and the eagerness for a high-quality life, many families and young couples are considering adding a new family member, a pet. However, where the pets come from is a big problem but very few people think about it much. In the meantime, lots of families are not ready to have a new member. So, often the pets are abandoned after a few months. This contributes to the rising number of animal intakes at shelters, as well as increases the euthanization rate. The goal of this thesis is to raise the awareness for people who want to take care of animals and to understand how their choices can significantly change animals’ lives.

Puppy mills are large-scale dog breeding operations where they treat dogs like products. Many animals die every day because of the terrible living environment. If people purchase pets through puppy-mill related stores, they are supporting the puppy-mill industry, often unknowingly.

The lack of time for pets and the cost of pet ownership are one of the reasons for abandoned animals. Some animals have been sent to the shelter and others are just abandoned on the streets or in the countryside, where they become strays. Currently, the stray animals are five times in quantity more than homeless people, and they are threatening the social order, traffic safety, and the sanitation situation. Lots of stray animals die every day in traffic accidents, from starvation, or illness. Animal control departments work very hard to keep the stray population under control. However, there is more intake than adopted animals, and shelters have to euthanize millions of them each year in the U.S.¹

For this project, research was conducted on abandoned animals and how they will end up in shelters. This included movies and animations about abandoned pets. General research showed that the key messages for most people are “adopt, don’t shop” and “adopt, don’t abandon”.

The main idea of this project is to create an interactive story to show the terrible living environment and miserable life for stray animals and animals who struggled in puppy mills. The goal is to raise awareness for people to save an animal's life by a simple action, adopting animals instead of purchasing. This project will exhibit the story of the animals by various storylines leading to different endings through motion graphics. Also, to increase the interest, some mini games associated with different storylines will be integrated for audience interaction. The target audiences are the people who want to have a pet, the people who already have one, and all those people who love animals and care about them.

---

Situation Analysis

Everyone loves the little fluffy creatures but very few people think about what happened if they are abandoned. As the American Society for the Prevention of Cruelty to Animals (ASPCA) states, there are approximately 6.5 million companion animals that enter U.S. animal shelters nationwide every year. Of those, approximately 3.3 million are dogs and 3.2 million are cats\(^2\). Due to the limited space and funds of shelters, about 1.5 million animals have to be euthanized each year. From the data ASPCA provided, there are 78 million dogs and 85.8 million cats are owned in the United States, among them, about 34\% of dogs were purchased, either from breeder or puppy mills. Puppy mills are industries that want to make the most profit from the puppies, thus, the puppies were bred and kept in horrible environments where space, water, and food are very limited. Both the mother dogs and their puppies won’t receive enough and effective veterinary care, and if the mother cannot breed anymore, they are discarded and replaced.

For those animals who finally found a home, some of them have to face a problem where their owner will abandon them. According to Ortiz, abandonment of an animal is usually a combination of an attitude where animal ownership is seen as short-term, rather than for the life of an animal, as well as changes to the owner’s life circumstances. The nightmare of these abandoned animals starts here and, if lucky, they will be sent to a shelter and hopefully find a new family soon. However, according to the chief executive of the Richmond SPCA, there are fates worse than death, and a lonely life sentence in a barren cage in a no-kill shelter must be one of them\(^3\). So, for the animals who entered the shelter, a new owner is their only way out. Other than that, they will either be euthanized or die slowly in the shelter cages because the longer they stay in the shelter, the lesser chance they will get to be adopted.

On another hand, there are many movies and animations talk about the topics regarding to love and protect animals. A movie named “Twelve Nights” is an example of the life of dogs in shelters. This movie is a documentary that records the last 12 days of life for the abandoned dogs in the shelter if nobody comes to adopt them. It is cruel, but it is the reality. The main idea of this movie is “Adopt, don’t Abandon”: “Adopt” is the way not to support puppy mills and save the lovely animals that meet your needs from the shelter at the same time. “Don’t abandon” is to tell people to be more responsive and care.

Additionally, the animation “The Secret Life of Pets” talk about the daily life of pets and stray animals. Whatever the differences are between the animals, they all hope for a family with friendly owners and comfortable beds. Even the wildest strays who had tough experiences, such as snowball, a stray rabbit, who also have the expectation in their hearts.

---


\(^3\) Predicting Future Trends on Pet Abandonment, Carlos Alberto Ochoa Ortiz
Problem Statement

Animals are our friends, especially when they are pets. So, protecting them becomes crucial. According to situation analysis, many animals die yearly because people abandoned them. Although the reasons are varied, the most common reason is that the animals do not meet their needs. For example, spending on pet food, pets’ living habits, and even their personalities can all affect why someone may or may not give up their pets. Therefore, adopting a pet is a good choice since people can learn more about their future pets in advance. So, how to make people want to get their new family members through adoption is a question worth considering and designing.

Most people don't know where their animals were born and the medical condition of their parents. We can only know their names and photos most of time. However, their living conditions are worthy of concern because many people buying pets from retail stores with genetic diseases, and/or physical or mental problems without knowing.

Also, people buy pets in pet stores because they are convenient and don't require too much investigation. When people want to adopt an animal, they need to visit a number of shelters to compare the animals, and they need to make a reservation for the time of the meeting. This can be a very complicated process for people.

Moreover, people will worry about the condition of the animals in the shelter. Why are they sent to the shelter, what are their physical condition, psychological conditions, and what the previous owners may have done to them?

To sum up, in this project, I will focus on acknowledge people the disadvantage of purchasing pets from puppy mill, and the advantage of adopting one from shelter. I also want to show people that the environmental significance of protecting animals. In order to eliminate people’s doubts, I will clarify the story behind the animals in the shelter, how the shelter works, and how to adopt a pet based on their own situation, not only because of the pet's appearance and the owner’s imagination.
Defining Concept

There are many media works about pets and stray animals. After conducting research which including books, movies, and animations, I thought these projects are more focused on telling the story and touching people. But they failed to ask the need of audiences and failed to tell them how to help animals in different situations. For example, what we should do when we meet a stray animal? How can we save an abused pet? Especially, how can we adopt an animal? Will it be a perfect choice? What is the benefit of adopting a pet from a shelter compare to purchasing one?

Games are a method that is accepted by children and adults, but also encourages them to think while playing. When playing games, people will think about the gaming process and the result, while in my game I want the users to think about how to save animals and the end results of animals, in both good ending and bad ending. Why should I adopt an animal compared to purchasing? What should I think about when I’m adopting animals? If I adopt a pet from a shelter, what is the benefit for me and for others? I want to communicate with users when they are using this project, not only watching a video without thinking.

Also, I found that gamification is an amazing way to influence subtly. When people play games, they will seriously think about what they will do under such circumstances. At the same time, in order to complete the game, they will try to understand the storyline and story background. That is to say, if you provide players with a realistic situation, they will find problems when they play and think about how to solve the problem. It is often more convincing and effective than telling them directly what they are and what they should do.

Therefore, I wanted to design a virtual shelter to help people to know the animals who are sent into shelters and how to adopt a proper pet from shelters. I’ll use motion animation to tell stories behind the animals. By designing some games to educate users how to protect animals in different situations, where the animals can be stray animals or someone’s pet. This game can be played online, on mobile devices, or on digital screens in public places, like shelters and animal help centers.
Target Audience

The target audience is the pet lover who wants to have a new pet, or just want to know more about shelters and the animals in shelters. There is no limit on age and gender. But they may need some basic skills in computer or tablet.

Persona 1

Name: Bill
Age: 24
Housing: Renting an apartment with his girlfriend.
Background: Bill is a newly graduated newcomer who plans to live with her girlfriend.
Challenges: Bill and his girlfriend are both new to having a pet. They don’t enough knowledge to keep a pet nor they have enough time to train it. And, they have limited budgets to purchase a new pet from a retail store because of limited income and high expense. Also, they want to find a friendly and quiet dog because they don’t want to bother their neighbors who live in the same building. They are looking for an effective way to help them find a proper pet.
By playing this game he can know adoption from a shelter is a better way to get a pet with a healthy body and a certain personality. And the most benefit is the cost is much lower.

Persona 2

Name: James
Age: 43
Housing: Living a house with his family.
Background: James is a father who has 2 kids. Also, there are 3 cats and 1 dog in the family.
Challenges: James knows there are many abandoned animals sent into shelters. He wants to help them and find a friendly pet to his kids. But he worries about the physical and psychological conditions of the animals in shelters. He is not sure are they suitable for his family, especially for his kids.
By playing this game, he can understand why animals are sent into shelters and how to help animals even they are out of the shelter. Also, he can find a proper pet by providing his real need in the shelter.
To sum up, the users want to know where they can get affordable pets, and they want to make sure the pets will meet their needs in all ways. This project will allow users to understand where the pets in store come from, what has happened to the pets in the shelter, and what will happen if nobody adopts them.
Design Inspirations

There are many reasons why a pet ended up in a shelter. To let users understand where the pets are coming from and where are the abandoned pets will go, I choose a breed dog as the prototype character. She was struggled in a puppy mill but escaped one day and ended up in street like a stray dog. She finally got into the shelter, but her life is pending on the adoption. There are also other characters from various backgrounds.

The stories will be demonstrated by 2D animation. Unlike the realism of movies or the personification of 3D animation, I hope that the story can be more metaphorical through 2D animation. A reference from animation "Adopt, don’t shop" was used. This animation inspired me by its color and how it tells the story. It used a dark and high contrast color palette to show the horrible living environment in a puppy mill. The scenes of caged dogs and hopeless faces gave me a profound impression.

Three animations were connected by games in the prototype. Each of these animations represents a different stage of the character: childhood in a puppy mill, terrible experience as a stray dog, and waiting for a family in the shelter. I want to express the feelings of the character by its color, movement, and music in the animations. I hope people can know more about why animals are shown in a shelter and will choose to adopt instead of purchase one as their new family member after playing AdoptMe.

Based on these stories, users can know more information about the animals that are selling in a pet store, like where they may come from, what is the living environment in a puppy mill, and what will happen to old breed dogs. It will help users to consider adoption rather than purchasing when they need a new pet. Also, it is important to decrease the number of abandoned animals to solve the space problem in shelters, because the number of intake animals is always more than the outtake number. The second story can help users to understand the terrible life stray animals’ has to reduce their chance to abandon a pet. Moreover, some users may concern about the physical condition of the animals in the shelter. The third story will let them know the whole recovering and training process before an animal is ready for adoption.

To increase the interest and truly participate in the story, some mini-games associated with different storylines will be integrated into audience interaction. For different characters, there are many things we can do in different situations. Every game will let users know that our simple action might change the whole life of the animals. Also, if users don’t want to help the animal or failed to save the animal, it will die, and the game will end.

The first game is helping the character escape from the puppy mill. Its inspiration comes from Klotski, a card puzzle game. The user needs to move the card to get the target through the exit. Unlike hard-to-implement 3D escape games, they are difficult to maintain coherence with 2D animated stories. This card

4 Adopt, don’t shop!, https://vimeo.com/193905792
The game can be well applied, and it makes people intuitively understand that it is nearly impossible for an animal to escape the puppy mill by themselves.

The second game is helping the character to pass the road to get to the help center. Commonly, stray animals were killed during their way crossing the heavy traffic. So, in this game, users should control the character’s movement to avoid the vehicle and eventually reach the help center across the road. This game was inspired by the game Crossy Road. If the character was killed in the game, it will give the user an impression to think about the real-world stray animals and lots of them dead on the streets too. In this case, it will help users to take caution when driving and help reduce the number of stray animals on the street.

The final selection is a questionnaire to help users obtain a proper pet recommendation based on their personal information. It will consider the age range, family member, house type, available time, and desired personality of the pet. Because the aim is not only to adopt a pet but also have a loyal friend with love to the end of their life. The questions are from the application forms of the Lollypop Farm Animal Center.
Logo Design

The logo was inspired by an image of human hands holding animals. This logo is trying to tell people that small actions can help animals to make a huge difference.

From the first versions of the logo, I improved the shape of hands, which also represent the ears of the dog. Also for the eyes, the circle shape looks like seals instead of dogs at the beginning so I changed it. As for the type, I use the footprint instead of ‘O’ to make the logo more fun.

![Figure 1. Logo iterations: I tried different shape of hands and ears.](image)

![Figure 2. Final Logo design: By iterating both graphic and typeface, I got the final Logo design](image)
Design Ideation

The main idea of this project is to create an interactive story to show the terrible living environment and miserable life for stray animals and animals who struggled in puppy mills. Additionally, the project aims to raise the attention of people to save an animal's life by a simple action, adopting an abandoned pet instead of purchasing one from unknown resource.

People always say they want to adopt an animal, but they often have little knowledge about shelters. This project is like a virtual shelter where users can understand the background of animals by customizing a character. Moreover, they can know what shelters did for the animals, and how to adopt one through animations and games. In the end, users will get an adopting recommendation based on their situation.

Figure 3. Design Ideation

At the beginning, users are able to select a character by their picture and a brief background. After users choose a picture, a new window of their story in animation will pop up. They can watch the animations to know more about what happened to that character. The 3-part animation can bring the user into character's world and experience their life, in this case, the user will have the same feeling as the character. During animation, there will be some games, users can lead characters out of their terrifying situations by playing the games. Using interactive games can make users more engaged into the character's life, think more about the character's background story, and the consequences if the game failed.

Figure 4. Project flowchart. There are 5 characters (potential to add more) in AdoptMe. Each character has their own story and mini games to connect animations.
At the end, users should make the choices of their gender, age range, living conditions, preferred animal, and the expected personality, the most important part, of the animal to get a recommendation. It is the same process where people get adoption application in shelter. It will help users get familiar to what they need to know and get prepared before they went to the shelter for adoption.

![Flowchart of the last game](image)

**Figure 5. The flowchart of the last game.**

All animations and games are designed to raise users’ awareness for protecting animals, either stop animal abuse from the source by not purchasing pets from puppy mill supported retail stores; or learn what happened to the stray animals who got abandoned and think twice before abandonment; or recuse animals already in the shelter by adopting them and give them another life to avoid them get euthanatized.
**Project Deliverables**

The final product for this thesis project consists of 2 demos of interface design, 3 pieces of motion animation and 2 games. Each of animations is a rendered around 30 second HD (1920*1080) QuickTime motion animation. The games will also be recorded as a demo by Quick Time. It will be easy to watch and understand. It will provide people with a sense of discovery and experience to learn about why there are many animals in shelters and how to adopt one.

For the animations, motion graphics, 2D graphic design, 2D animation techniques were used. Motion graphics production was created with Adobe After Effects. The characters and scenes were created using Adobe Illustrator and Photoshop. The text and music were added in Adobe After Effects after the previous processes.

![Figure 6. Workspace in Adobe Illustrator: one scene of first story.](image)

![Figure 7. Workspace in Adobe XD](image)

The interface designed in Adobe XD.
The games are illustrated in Adobe Illustrator and collaborated with a game developer in Unity.

Figure 8. Workspace in Unity

Through the cooperation with developers, I think Unity is an effective way to achieve the game. It transforms 2d illustration into a game with a 3D sense of space very well. I can achieve the games to align the style with other animation.

The voice over was recorded in RIT’s recording room and post-remixed in Adobe Audition. The background music was composed by a student composer.

Figure 9. Workspace in Logic Pro
Design part 1: Customize

At first, users should choose a character which they are interested in based on a basic brief of the character. They can know the name, age, gender, and rough background of the character.

Character Design

There are many reasons why animals appear in a shelter. So, I designed a variety of characters with different backgrounds. In this way, users can understand the story behind them by selecting different characters for operation. For example, dogs that were abandoned by their owners because of injuries, dogs that plan to be killed because of failure in a race, etc. Considering the real situation, the golden retriever is the most popular breed in pet stores. I chose a golden retriever breed dog as a main character. It will help users understand the dark background that how this popular dog is bred in large numbers to meet consumer needs.

The main character, Betty, is a golden retriever dog who grew up in a puppy mill. She became a breed dog because her mom gets ill and can no longer breed so the puppy mill discarded her mother. For her I designed a selfie for character selection. The other poses and movement are prepared for the animation.
The other characters are Zoe, Lulu, Lucas, Cindy, Matt, Aha, and Ninja etc. Each character has their own different background. At the beginning, users are able to read a brief of their story. And then, they should choose one to visit the interactive story in detail.

All characters are designed for helping users know the story behind the animals in a shelter. By understanding these stories, users can better understand the animals they want to adopt and the reason why there are a lot of animals sent into shelter.
1. Iteration

In this part, users should select a character to start the game. The first version was not like an attractive and interesting game. To provide users a better using experience and a virtual shelter environment, I improved the hierarchy and the typeface in this screen. (please check final design below)

![First version of the character selection.](image1)

**Figure 14. First version of the character selection.**

2. Final design

The new version is more like a selfie wall. Users can see the happy smile on these animals’ face. I hope this can make people willing to adopt them. By checking different characters, users will know the complicated reasons why the animal was sent into a shelter.

![This screen is like a selfie wall. Users can choose any one they are interested in to check the details. I want to show people different reasons why animals are shown in a shelter.](image2)

**Figure 15. This screen is like a selfie wall. Users can choose any one they are interested in to check the details. I want to show people different reasons why animals are shown in a shelter.**
By selecting the selfie of a character, a pop-up window will show the details of the character.

*Figure 16. Main character in prototype, Betty*

*Figure 17. Other characters Zoe*
Design part 2: Motions

There are 3 animations for showing the different periods of Betty. I created the storyboard before I start illustrating in digital version and building animation. For helping users understand the changes in Betty’s feelings, I designed a different color palette for each animation.

1. The first story, childhood in a puppy mill

After a character is selected, users are able to dive into the character’s story. The first animation is telling who the character is, where did he or she came from and how he or she grew up. Betty, in this example, is a 3-year breed dog in a puppy mill. When she was a little puppy, she thought her life would be happy and healthy forever. However, her sisters and brothers were sent to different pet stores in different cities. Finally, Betty replaced her mom because her mom became ill and could no longer breed. There are many other breed dogs are locked in the same narrowed cage with Betty. The cage trapped not only their life but also their future development. The puppy mill where she lived is a money-making factory. She was treated like a breeding machine while Betty must pregnant over and over again, and with all her babies serving as the products that would be shipped to different pet stores all over the world.
By using the strong contrast color in the first animation, it indicated users the huge difference between the animals’ living situation and what she expected from life.

![Color palette of the first story, when Betty is in the puppy mill.](image)

**Figure 20.** Color palette of the first story, when Betty is in the puppy mill.

1) **Iteration**

At first, I decided to include more details, such as Betty’s mother is howling because her babies have been taken away, all puppies are held in individual cages and each of them has different postures and colors. Later I find out if the animation is too detailed, it may not represent all the puppies who are suffering because there are too many details cannot be shown in 2D animation. So, I decided to simplify the graphics to illustrate the story by using some symbolic elements. It is also helpful for users to understand the story and pay more attention to the character.

![First version of the first story: Childhood in a puppy mill. Betty’s mom is howling since her babies were sent out. And the bad living environment in puppy mill.](image)

**Figure 21.** First version of the first story: Childhood in a puppy mill. Betty’s mom is howling since her babies were sent out. And the bad living environment in puppy mill.

By using metaphorical graphics, users will know the truth that puppy mill treats breed dog as fertility machine. Every newborn puppy is a product of this assembly line factory. But, in the beginning, the illustration looked so cruel and experimental. Also, the color was not aligned with the color palette.
Figure 22. Different version of puppy mill scene. Childhood in a puppy mill. Puppy mills are fertility factories, not a paradise for newbons.

2) Final design

After iteration, the final design will help users understand the terrifying truth on breed dogs in the puppy mills and the blood business behind purchasing a pet.

Figure 23. The animation is started with Betty’s introduction.

Figure 24. The miserable life of Betty who is trapped in small cage with other puppies.
Figure 25. Used assembly line to represent puppy mill’s production line is ruthless and mechanized. This part will help users know how the puppy mill works and make money.

Figure 26. Each puppy will be sent to different retailers as soon as they meet minimum requirements.

Figure 27. This screen asks players to help Betty to escape the puppy mill, otherwise she will ended dead in the puppy mill just like her mother.

At the end of first story, users will make their first choice: help Betty or not.
2. The Second story. Stray dog

With the users’ help, Betty escaped from the puppy mill successfully. Here is the second animation comes in. It talked about the terrible experience after Betty became a stray dog. She thought her life would be free and happy. But the reality shocked her pretty hard. Betty had to keep walking to find food or water, even in bad weathers. Moreover, she met many tragedies happened on other animals she never heard before, like car accident, beaten by humans, toxic food in the trash and so on. After several days of walking, Betty was exhausted, starved and completely lost. She knew the tragedy would happen to her someday if she was still a stray dog.

Figure 28. Storyboard of the second story: Stray dog. I illustrated the scenes of the desperate experiences Betty met after she escaped from puppy mill.

After Betty escaped from the puppy mill and became a stray animal, I used the grey color palette to express her confusion in the second animation. This color palette also helped to create a disappointing atmosphere when users are watching.

Figure 29. Color palette of the second story, when Betty is struggling as a stray dog.
1) Iteration

For the second story, to present the bad accident Betty might meet. I drew the scene in detail. But, also, the dyed face, the blood might affect the age range of the audience, which is not users expect to. I improved these scenes to make them more obscure, but users can understand.

![Figure 30. Design iterations of the Second story: Shelter, New life. Some bad accident Betty might meet.](image1)

I also tried some different style of the background of the animation. Those detailed lines will always distract the audience and prevent them from focusing on the protagonist. So, I gradually simplified the proportion of lines in the picture and simplified the background into color blocks. At the same time, I improved the colors to let users feel how confused Betty is.

![Figure 31. The first version of second story. The background of city scene.](image2)

![Figure 32. The second version of second story. The background of city scene.](image3)
2) Final design

This part mainly shows users what the stray animals’ life will be. I added the footprint in the rain. Also, I used different fur texture of Betty to illustrate the feeling of her. These detailed animations will make users enjoy this animation more and be moved by it. I hope after users seen Betty’s experience, they will think twice before they are going to abandon their pets, and for those users who wants a new pet, they will think about adopting one first. These detailed animations can make users enjoy this animation more and be moved by it.

Figure 34. Betty escaped puppy mill and start to walk around with no destination in mind. She has no place to hide from the rain, so she has to keep on walking.

Figure 35. Betty met other stray animals who are killed by toxic food and saw human drive out stray animals.
3. The third story, Shelter, new life.

After users helped Betty to go to the help center successfully, Betty was sent to the shelter. She was initially scared by the building as she thought it was another puppy mill. Things turned out quickly that proved her wrong. At first, Betty took a shower. Then some people performed a health examination on her and treated her with medicines. Betty became healthy and clean again. She can enjoy abundant food and have fun here. Also, she was trained by shelter professionals and received a tag signifying that Betty is ready for adoption. While she was waiting for people to choose her in the crate, she met many new friends who had different backgrounds. Although Betty is happy here, she can’t live here forever. If no one wants to adopt her she’ll be euthanized because of the limited space in the shelter as there is more intake than outtake here. Every animal in the shelter is always waiting for their next owner to bring them home as soon as possible.
For the third animation, I choose a bright color to show the character’s positive mood after she has been rescued. Also, these happy colors can help users to imagine a happy life after they adopt one of the animals.

Figure 38. Storyboard of the third story: Shelter, new life.

1) Iteration

To help users know what the rescued animals will meet after they are sent into a shelter, I listed the things step by step. I used a conveyor belt to send Betty to complete the list. However, it makes users think if this is another assembly line factory. To clarify it, I deleted the belt and tried to use a more creative transition to show the interesting experience in the shelter.

Figure 39. Color palette of the third story, when Betty is rescued by a shelter.
Same as the other two animations, I tried to use detailed lines as background at first. To make the whole project more sense of consistency and coherence, I changed the style of this animation, which is simplified the background to make users pay more attention to the character.

2) Final design

After the user testing on Imagine RIT 2018, and other feedback, I iterated some parts of third story. The diagnosis part turn to X-ray graphic. In order to make a more interesting transition between Betty enjoys her food and plays games, I changed Betty's action, she jumped out of the hill of food to pick up the frisbee.
Figure 42. Betty arrived in shelter and she needs a bath.

Figure 43. A thoroughly examination to make sure Betty is ready for adoption.

Figure 44. Betty now has enough food and lots of treats.
Figure 45. Betty received basic trainings. She passed all the trainings and got her tag.

Figure 46. Daily life in shelter playing with other dog, waiting for adoption.

Figure 47. Due to the lack of funds and space, Betty will be euthanatized if nobody is going to adopt her after a certain period.

However, if nobody wants to adopt Betty, she will be euthanized because of the limited budget and space in the shelter. So, the final part is: Do you want to adopt an animal from a shelter? I want to let people know the leftover animals in the shelter will be euthanized because of the limited space and budget. This part can help users understand what the shelter did to help animals recover and be trained. The users will have an idea about the health and psychological conditions about the ready for adoption animals.
Design part 3: Games

Figure 48. Game design part

There are 2 games in the prototype. Escape from the Puppy Mill, and Get to the Center. They were built in Unity through collaboration with a game developer.

During the teamwork with the game developer, I created the layers in Adobe Illustrator. Then, I exported all file by PNG format and sent to the developer. The software used to build games is Unity. I need to build a 3D world for the game and set camera which will render the game for playing. And my experience of Maya and C4D helped me a lot to understand the position of each elements, even the angle of camera.

Figure 49. Workspace in Unity

1. The first game, Escape from the Puppy Mill

The first one, Escape from the Puppy Mill, will be active after the first animation. The locked cards represent differently obstructs in puppy mills. The character is so weak that she is lying down in a cage. When users try to help her escape, she will change her pose to running model. To win, users need to help the target card, pass the exit by moving around other cards. Otherwise, the game will end, and the character will die. As for the background, I use a dark blue to imply the tough environment in puppy mills. Also, I draw a random scratching pattern which shows the desperation of the poor breed animals. By
playing this game, users will understand that a puppy mill is a heavily guarded place, it is difficult for breed dogs to escape from there by their own efforts.

![Image](image1.png)

Figure 50. This is inspired by a famous ancient Chinese game called Klotski, which means Betty needs to find her way out by moving different blocks.

![Image](image2.png)

Figure 51. Betty starts to move so she stood up. Finally, Betty found her way out and the puppy mill is not alarmed.

2. The Second game, Get to the Center

After experienced all the nightmares on the street, Betty asked for users to help again. There is an animal help center just across the road. If users choose to help Betty, they will play the second game: Get to the center, which is a game to help Betty crossing the road. If the user chooses not to help her, she will attempt to cross the road anyways and struck by a car, she will be dead and the game ends. Or if the users choose to help but failed to avoid cars, the game ends as well. This game is intended to tell users stray animal can kill themselves during heavy traffic, and they can also be endangering human’s life as well. Users will have the experience as a stray animal attempt to cross a road, and it is fairly hard without human’s help.
1) Iteration

In the first version, character looked too 3D style which is not fit with other parts of this project. And the color palette of this game is too bright and happy, which is totally different from the animation. To give users a better playing experience, I will improve the color palette and the modeling of Betty.

![Figure 52. First version of the first game: Get to the center.](image)

2) Final design

![Figure 53. The street is busy and if she is hit by the car means game over.](image)

These games will help users know more about the bad situation of the animals in puppy mills and on the street. The failure in-game will remind users the chance of survival in the real-world is rare and most of the animals won’t even get the chance to be rescued to the shelter.
The last part, Adopt One, is asking users to answer some questions based on their basic information. This game will help users to consider what kind of animal do they prefer and find the most proper pet. As users complete a question, they will move to the next question without clicking. By designing various icons to present different conditions, users will have a more interesting interactive experience.

In this part, users will get a recommendation animal by selecting their real situation: gender, age range, living conditions, what kind of animal is and the personality of the animal. All questions are the same as what users should consider when they plan to adopt a pet from a shelter. Users can have a better idea about the animals before they adopt them, and in this case, it will reduce the chance that the animals be sent back to the shelter in the future.
People in different age range may have a different need from their pets. Asking age can help them find a proper pet.

*Figure 56. Telling shelter what your age range is.*

If there are children in the family, the health and psychological condition of the pet should be considered more carefully.

*Figure 57. Selecting family members.*

In some shelters, people can adopt not only dogs and cats, but also can adopt small animals like birds, rabbits, etc.
People always expect their pets to have certain personalities. If they can know that first, it will decrease the possibility of abandonment late in time.

Figure 58. Choose what kind of animal do you want to adopt.

Figure 59. Choose what personalities you prefer for your pet.

Figure 60. Get the recommended pet based on real situation.
Design conclusions

This is a complete workflow of a character (Betty) in AdoptMe, including character selection, animations, interactive games, and final recommendation. The final design will help users know why the animals are in a shelter and how to adopt a pet in a shelter. I hope this story from the character can persuade users to consider adoption instead of purchasing when they plan to have a new pet. This small action will change the animal’s whole life.

Through the improvement of animations and games made me realize some minor changes can give users a very different feel. For example, the wet footprints Betty left behind when she was walking in the rain, the drooping tail when Betty feel depressed, and the cheerful shaking tail while Betty is waiting for adoption. These are not only made me exercise my design skills, but also helps users to understand the importance of adoption. I hope these details can impress users and make them more aware of the abandoned animals.
Technical Problem and Solving

1. How to make the game suitable for both children and adults, especially the content?
   Considering the real situation, families, especially the ones have kids, are the main crowd with plans to add new pets. However, there are many scenes which might be too bloody or crucial for children in my story. After many tries, I use some symbolic metaphor for the various situations.

2. How to transfer the mood in 2D motions?
   Unlike the real movie, how to make the character real and resonate with users is a problem. I tried to use different poses and the speed of movement to show the feelings and conditions of characters. Also, I worked with a composer, to create different circumstances/moods through music.

3. How to build games and deliver the final design
   The games were drawn in Illustrator and built in Unity. The whole prototype was rendered with Adobe After Effects. But how to make this project to be a real interactive game, I need to learn more about game programming.
User Research and Testing

To prepare for the project, AdoptMe, I did a lot of research on the subject of adoption. I read many articles about shelters and puppy mills (will be mentioned in the reference section). I also watched some movies about stray animals and the animals in a shelter (A Street Cat Named Bob, Twelve nights). In addition, I went to two shelters in Rochester: Lollypop farm and Rochester animal service. I got more information about Shelter's workflow: what would the dogs or cats be treated when they were abandoned into a shelter. And what steps people should follow when they want to adopt an animal.

![Figure 61. Application form of Lollypop farm animal center](image)

I hope through this project, people can find the answer to the animals in a shelter: where do they come from, are they unhealthy or bad-character animals, what is the benefit of adopting an animal, and is the adoption process complicated. The objective of AdoptMe is making people realize that adopting animals is a very simple and meaningful matter. The pets adopted from the shelter are usually fully vaccinated and health checked, and most of them have completed behavior training. What's even better is that most of the animals in the shelter are adults, and people can know their personality, which is an important element when people choose a pet.
The evaluation process and feedback were vital for the thesis project. Two methods were used to do user testing. One is the observation of user-interaction with friends and colleagues who were interested in this project. Another one is doing surveys on the MFA Thesis Show in May 2018 and Imagine RIT in April 2018. These user testing focused all-age users and got feedbacks in a different aspect.

1. More Characters

I'll complete animations of all characters in the future. To add more characters, I'll do more research to show the animations based on real stories.

2. The button is not attractive in the last version

I'll change the color of the icons instead of grey. Also, I'll improve the format of the last version.

3. The 3D character for game 2 ‘Get to the center’ is not fit for the game.

I will draw the poses as a 2D style instead of the original ones.

4. Add shadow for characters.

I'll improve the animations by set light to get shadows.

5. What will happen if the user chooses don’t help the animal?

I'll draw the new animation scenes to show the situations that animal dead for different reasons.

6. In the second story, the character walks so weird.

I redesigned the walking movement by observing how an alive dog walks and learning the tutorial of dog walk circle.

From the testing, I got some very good feedback about AdoptMe. Some users said it’s the first time they know animals in a shelter will be euthanized if no one wants to adopt them. Some users were so excited about this project, helping people know more about abandoned animals and shelters. Most people said they are willing to try to adopt animals after playing the game.
Future Iterations

Based on the feedback I received, I'll keep improving the animation to make the scenes more touchable and the movement of character smoother.

Then, I'll finish all the storylines of the characters to enhance the game so people can know more stories that always happened on the animals. Also, I'll complete the coding work to show this work online or on devices.

After I finish the game, I want to have it installed into shelters. Then, users can get a recommended animal from the shelter by the last game ‘Adopt One’. This gives users a real choice, not a fake fantasy. Then, I'll publish the game online. By collecting all the continually updated information from shelters and analyzing the data, the user can get recommendations from all shelters based on the preferences and location. Therefore, users will have more choices. Meanwhile, we can help more animals.

Furthermore, I want to design a virtual pet in this game. Users who worry about how to take care of a pet can know and learn the basic skills and common problems. This would include everything from what foods they can or cannot eat, behavior issues and discipline, to habits. The virtual pet will show the different personalities according to the recommendation of the user. Therefore, the game will help users better feed their pets and learn about their pets. At the same time, when you encounter some problems, you can respond in real time.
Conclusion

For this project, I used metaphorical illustration and sequence animation to represent the story because compared to real videos, it is more acceptable for audiences of all ages, especially for some cruel scenes, and it is also a better way to attract the user’s attention. In my animation, an assembly line was used to represent the puppy mill’s production process, where the newborn puppies are like the lifeless products produced by breed dogs which are abused as fertility machines, and the puppies were sent to all the retailers as soon as they met minimum requirements.

To let users know the different stories behind animals in shelters, I set up multiple characters to show why an animal could have ended up there. For example, Betty is a breed dog in a puppy mill; Zoe is a racing dog that lost in a game; Matt lost one of his legs in a car accident. I want to let users know the reason why a dog is in a shelter is complicated. Sometimes, it’s not related to their health and personality.

People always come with an idea about adopting animals, which might quickly slip out of their mind because of the complex process for adoptions. So, in the last game, users can experience how to adopt an animal in a shelter and get a recommendation based on their own situations. Also, I added some small games to the story that the user’s interaction can directly impact the characters’ fates. In this way, users can understand that their one movement can change the animals’ life significantly.

Through this project, I practiced my skills in storytelling, color, and motion. By researching, I know how to use a different color, and color contrast to create an atmosphere of the animation. Dark and high contrast color makes people feel intense. But low saturation colors make people sad. So, I am using different color palettes to express the mood of the characters in different scenes, as well as the feelings of users. How to use a proper color palette in different situation is what I learnt from this project is one of my most important gains from this project.

For the animation game, the animation is an important part to which I paid more time and effort. I tried to refine the new image of the character by refining the story so that people can understand what I want to express in a short time. I did a lot of research about animals’ behavior. For example, in the second animation, when Betty escaped from the puppy mill, she was so happy. At that time, her tail was raised so high. But, when she realized that the real world was not as good as she imagined, but full of disasters, she felt very tired and desperate, her pace became slow and her tail dropped to the ground.

I developed my software skills during the thesis process. I improved my illustration by the characters and the scenes. Also, I learned and integrated a lot of motion tricks, such as speed adjustment, special effects, and so on which are so helpful and useful for my future works. Besides the basic function, I did a lot of work on movement speed to make every element of the animation is moving smooth. For example, how the wind blows, how the car drives, how the hairdryer works, and so on.
Even though I still have some parts need to be improved. The transitions between animation scenes are not smooth and creative. Some parts are not attractive enough. The characters need to be more detailed. The environment of shelter looks so boring. Even the start part, selecting character, and the final part, “Adopt one”, are not attractive enough. The layout should be thought over.

Last but not the least, I cooperated with a game developer and music composer for this project which was a wonderful experience. I now understand more things beyond the realm of design. For example, what format should be rendered that is easier to use for the developer? How should one show different format works on the website by coding? Considering different scenes, what music can clearly express the feelings of the story? At the completion of this project, I can now answer all of those questions and more.

Concerning future iterations, AdoptMe is currently limited to the character Betty. Designing for more stories of other characters could be a valuable design direction. Because most abandoned animals are healthy and kind which are misunderstood by most people. I hope people can know more about this information by playing AdoptMe.

Additionally, it will be so meaningful to associate with real shelter, which AdoptMe could recommend a real animal of real shelters, which users can truly adopt as a proper pet, not a virtual character. I hope in this way, I can provide more information to the public about shelters and the animals who need to be adopted. Also, help users to find a proper pet friend to avoid abandon them again.

With continuous improvement, it will become a more experienced and persuasive animation game with the topic of animal adoption in the future.
References

1. Inapptics, “3 Ways You can Benefit from App Gamification”, May 29, 2018, https://uxplanet.org/3-ways-you-can-benefit-from-app-gamification-12e1d67995c0


8. Zichermann, Gabe, Cunningham, Christopher, Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps, 2011

http://web.a.ebscohost.com.ezproxy.rit.edu/ehost/detail/detail?vid=0&sid=99f41b52-a1e7-49ee-9404-c5c2d6656b46%40sdc-v-sessmgr03&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=415424&db=nlebk


