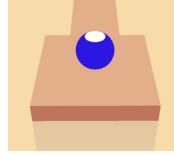


# StrangeRoad

Game Design Document



## 1. Game Overview

### Name

Strange Road

<https://youtu.be/WlIFxTex6Ek>

### Genre

Endless Running Game

### Target Audience & Platforms

Aged 16 to 45 with mobile devices, the game is designed to be simple, easy to play.

### Elevator Pitch (Summary)

You switch the track on the road so that a colored ball goes into the right way, where there are no obstacles. You earn coins every crossing and you can buy items for special power, for example, slowing ball down or breaking through any obstacle.

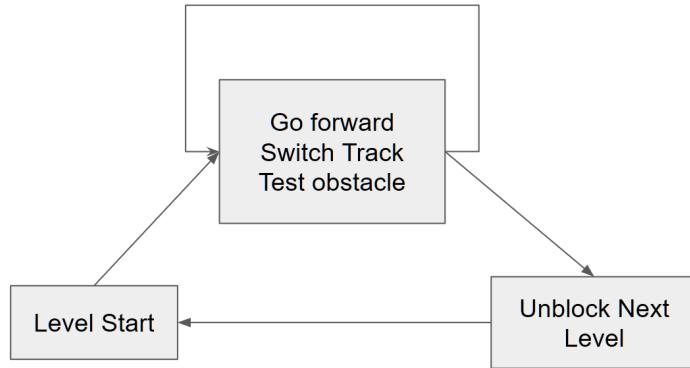
## 2. Gameplay & Mechanics

### Objectives

- Make the right choice at every switch
- Survive as long as possible

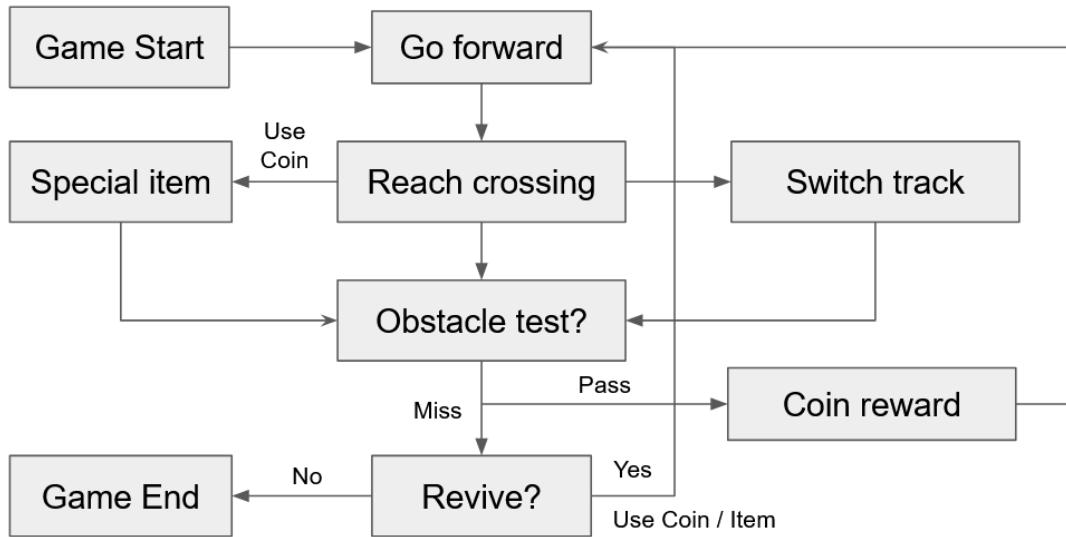
### Core loop

- The ball moves forward endlessly on the track.
- The ball can only go through without obstacles.
- Player can switch the track at every crossing.



## Game Flow

1. Game Start.
2. The ball has a specific color and keeps moving forward on the track.
3. The ball reaches a crossing where player can change the direction so that the ball goes to the right way.
4. There are some coins right after the crossing on the road and the ball can only go through the gates without obstacles.
  - a. If you hit the obstacle, game over (before game over player has a chance to use coins to revive).
  - b. If the ball passes gate, it will keep moving and collect coin rewards.
5. While on the road, there will be some items to collect.
6. While on the road, the player can use special items, each costs some coins.
  - a. [Smash] For a certain period of time, the ball can go through the gate of any color.
  - b. [Slow] can slower the speed of the ball
  - c. [Diamond] Doubling coins collected for each gate.
  - d. [Bomb] Destroy oncoming gate.
7. There are checkpoints on the road where game will be saved. Player revive from the lastest checkpoint.



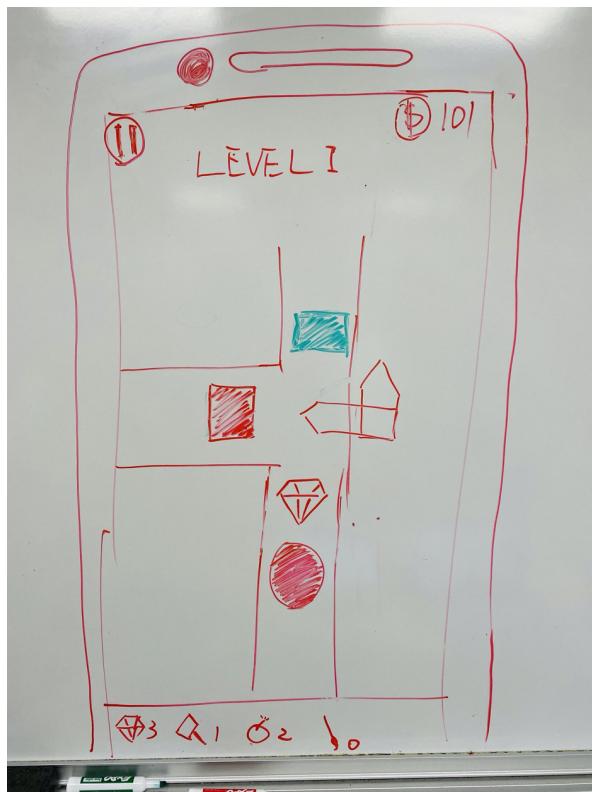
### 3. Interface & Mechanics

#### Core Mechanics

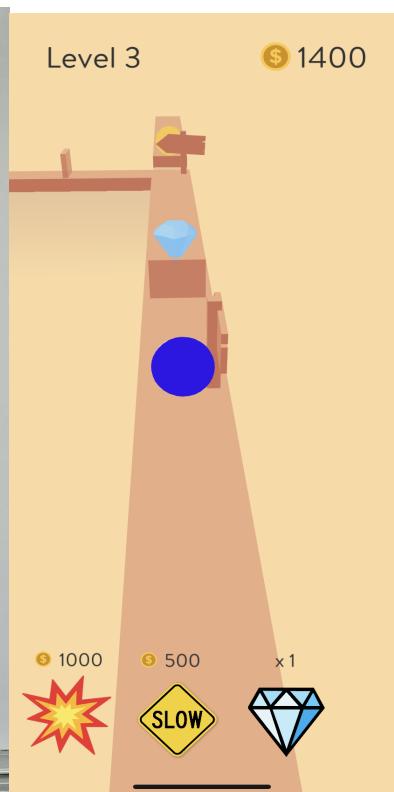
- Switch track by tapping the screen.
- Use item by tapping item buttons placed on the bottom of the screen.
- Camera always follows the player.

#### UI elements

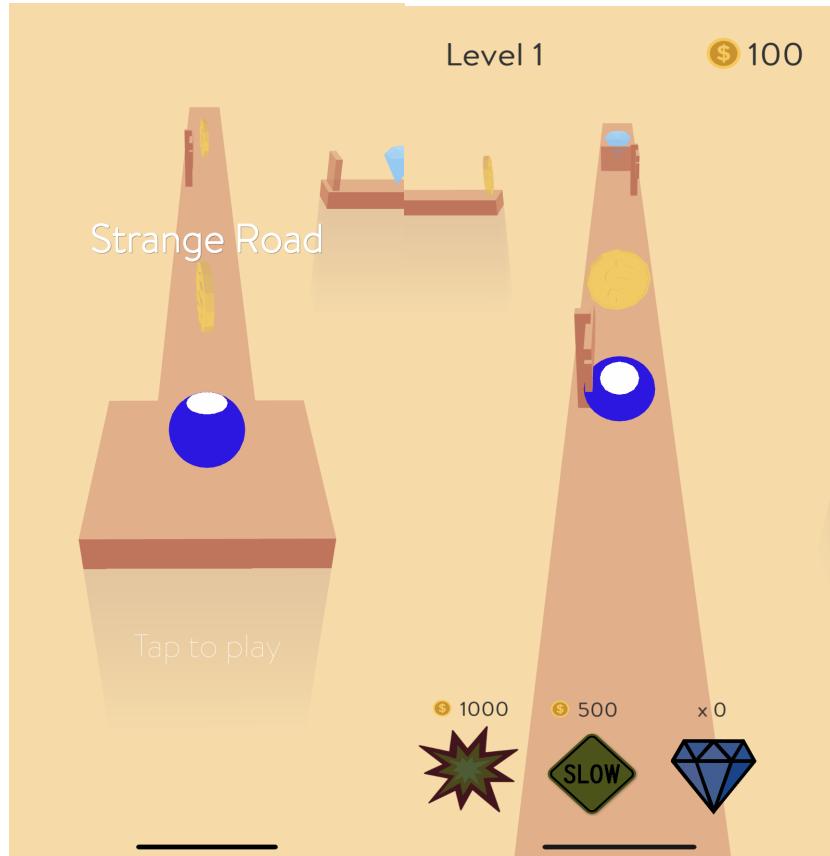
- Top: Level indicator, Coins
- Center: Main game canvas
- Bottom: Item buttons



UI drawing



Finished prototype



#### 4. Improvement in Final Prototype

1. After passing each 10 gates, speed will increase by 0.1. Top of the screen now has level display
2. All item prices are displayed



3. Items now can be repurchased before the end time and timer will be reset
4. Fixed the bug that item cannot be used when money is insufficient
5. Fix coin layout: when money number becomes longer, it will display correctly



6. Item availability hint  
It will display properly when it can be used



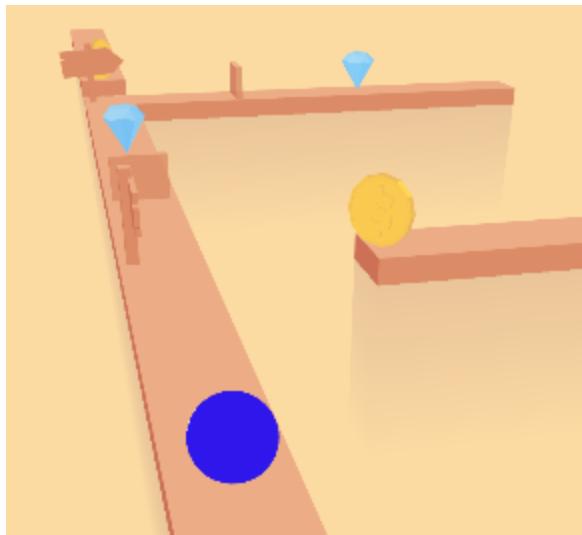
It becomes red when it is in using  
It becomes gray when it is unavailable



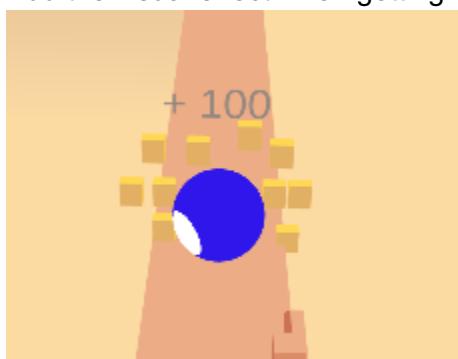
7. Item expiring hint  
When the Item effect is about to end, add the jitter effect.



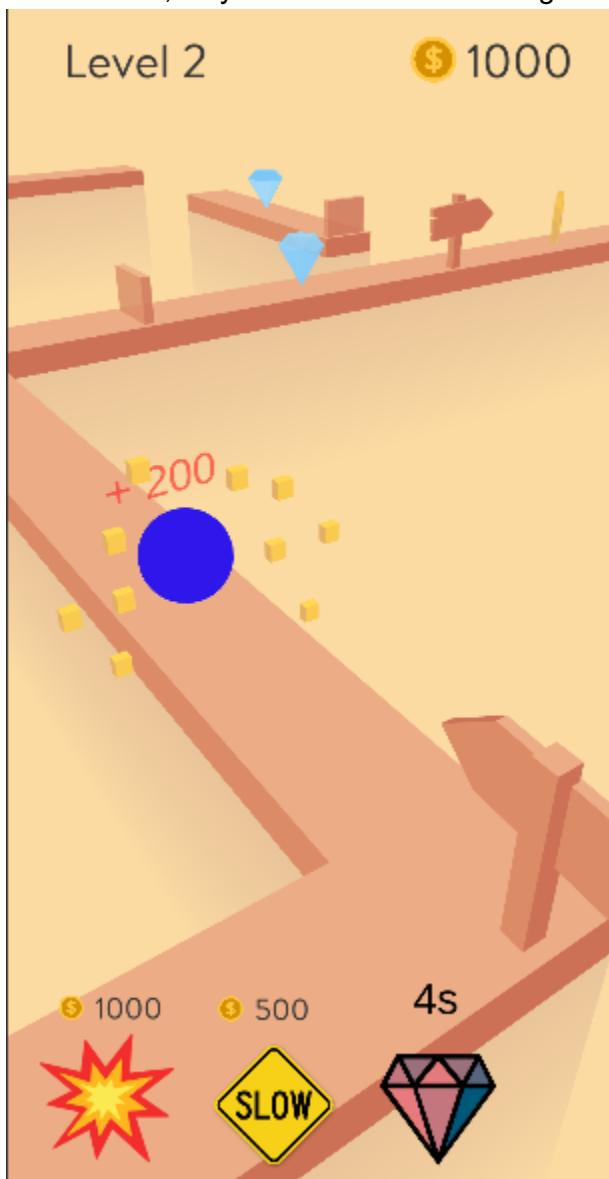
8. Change blue block to coin  
It will change the allowed blue block to coin. It becomes more intuitive this way.



9. Coin increment hint  
Add the visual effect when getting coins



10. Add diamond item: Diamonds can only be collected and cannot be purchased. Diamond will double the coin gains. Diamond effect only lasts for five seconds. It is only behind the obstacle, so you need smash item to get it.



## 5. Business Plan

### Business goals

Increase profit by USD \$70,000 and reach 1,000,000 downloads in one year.

### Monetization plan

Currencies: Coins. There are two ways to get coins.

- When users pass the gate, players earn some coins.
- Collect on the road.
- Use dollars.

Items: Several available items

- [Slow] can slow down the speed of the ball
- [Smash] For a certain period of time, the ball can go through the gate of any color.
- [Diamond] can earn double coins/energy when users pass a obstacle
- [Bombs] can remove one obstacle
- More items come later

Banner ads: The ads will show on the screen, it can earn some revenue but may be somewhat annoying for users.

Remove ads: we will have a premium version of the game, which is without ads, goes for \$0.99.

Video ads: After users died, they have an option to watch some short ads videos to revive.

## **6. Data Analytics**

### **10 things to track**

We invited 10 users to test our game from November 4th to 24th, 2019. The testers are 50% males and 50% females, all of them are graduate students from different majors, such as Computer Science, Electrical Engineering, MBA, Biology, etc.

We use Unity Analytics to track specific events with our game. These are the 10 things our team decides to track:

1. If a player buys a [Smash]
2. How many users buy more than 10 [Smash]?
3. If a player buys a [Slow]
4. How many users buy more than 10 [Slow]?
5. If a player spends all their coins
6. What is the most coins players get so far?
7. What is the most gates players pass so far?
8. If a player finishes 50 gates?
9. How long does a player spends on this game today?
10. How many users play more than 30 minutes today?

## Result

1. If a player buys a [Smash]  
Ans: 6 users
2. How many users buy more than 10 [Smash]?  
Ans: 6 users
3. If a player buys a [Slow]  
Ans: 2 users
4. How many users buy more than 10 [Slow]?  
Ans: 2 users
5. If a player spends all their coins  
Ans: 0 users
6. What is the most coins players get so far?  
Ans: 8300 coins
7. What is the most gates players pass so far?  
Ans: 83 gates
8. If a player finishes 50 gates?  
Ans: 2 users
9. How long does a player spends on this game today?
10. How many users play more than 30 minutes today?  
Ans: 1 user

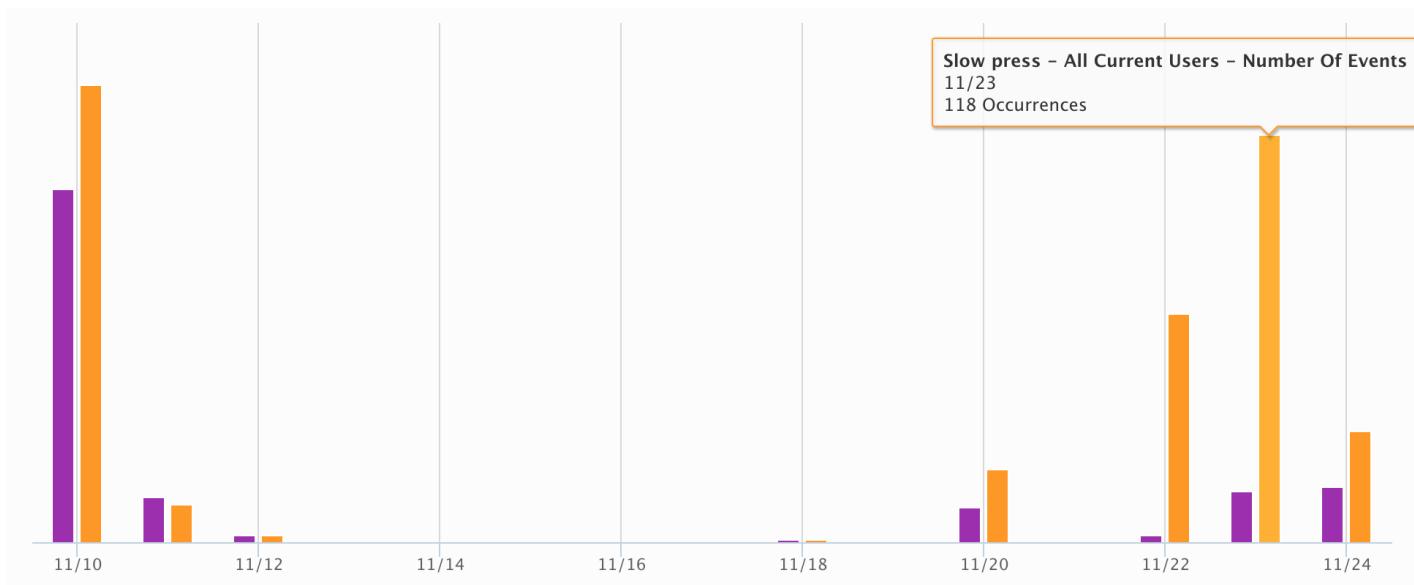
Based on our data collected, we found our players use special items quite often, especially the [Slow], which can slower the speed by 5 seconds. The reaction and speed are the keys to get high scores in our game, we think maybe that's why our users like this special item. However, according to our results, there is no user ran out of their coins during the game. It seems the special items are too easy to get, and feel like free for users. Therefore, to make our game be more challenging, we decided to increase the price of our special items from 100 coins to 500-1000 coins.

	Smash press	▼	All Current Users	▼	Number Of Events	▼	count	<span style="color: blue;">-</span>
	Slow press	▼	All Current Users	▼	Number Of Events	▼	count	<span style="color: blue;">-</span>
Number of Users		▼	30min+/day players		<span style="color: blue;">-</span>			

+ Metric + Custom Event + Ad Metric



11/10/2019 - 11/24/2019



● Total Daily Play Time - All Current Users  
● DAU - All Current Users  
● Number of Users - 30min+/day players  
● Smash press - All Current Users - Number Of Events  
● Slow press - All Current Users - Number Of Events



11/10/2019 - 11/24/2019

Date	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18
Smash press - All Current Users - Number Of Events	102	13	2	0	0	0	0	0	0
Slow press - All Current Users - Number Of Events	132	11	2	0	0	0	0	0	0

● Total Daily Play Time - All Current Users  
● DAU - All Current Users  
● Number of Users - 30min+/day players  
● Smash press - All Current Users - Number Of Events  
● Slow press - All Current Users - Number Of Events



[CSV](#)

11/10/2019 - 11/24/2019

5	11/16	11/17	11/18	11/19	11/20	11/21	11/22	11/23	11/24
	0	0	1	0	10	0	2	15	16
	0	0	1	0	21	0	66	118	32

- Total Daily Play Time - All Current Users
- DAU - All Current Users
- Number of Users - 30min+/day players
- Smash press - All Current Users - Number Of Events
- Slow press - All Current Users - Number Of Events

The Charts shows users use [Slow] (orange) more than [Smash](purple). More screenshots of our data analytics please refer to Appendix C

## 7. Live Ops

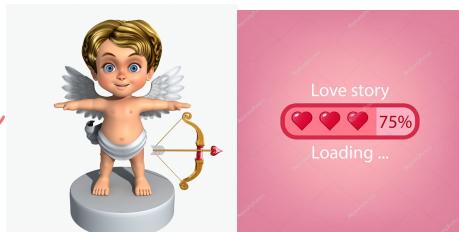
### Content Calendar

	Start Date	End Date	Events	Duration
1	02/08/2020 (SAT)	02/14/2020 (FRI)	Valentine's Day	One week
2	04/01/2020 (WED)	04/07/2020 (TUE)	April Fool's Day	One week
3	07/01/2020 (WED)	07/07/2020 (TUE)	Summer Time	One week
4	09/01/2020 (TUE)	09/07/2020 (MON)	StrangeRoad Anniversary	One week
5	10/26/2020 (MON)	11/01/2020 (SUN)	Halloween	One week
6	12/25/2020 (FRI)	12/31/2020 (THU)	Holidays 2020	One week

### Event Details

#### 1. Valentine's Day

♥HAPPY  
*Valentine's*  
DAY♥



(concept pictures)

Date + Time:

- 02/08/2020 (SAT) 08:00 ~ 02/14/2020 (FRI) 23:59 local time

Features:

- Valentine's Day UI: We will have a pink theme to celebrate Valentine's Day. The color blocks will change to heart shape!
- Valentine's Day Special Guest: Cupid. When you have passed through 20 gates in a row, you will meet Cupid. Cupid will help you to skip to the next level.

Rewards:

- 2 x Coins when passing through a gate

- Special box is available for sale for a limited time during the event:  
Content: Smash x 10, Slow x 10, diamond x 10  
Price: USD\$5

Team:

- Engineers x 5
- Designer x 1
- Writer/Event manager x 1

## 2. April Fool's Day



(concept pictures)



Date + Time:

- 04/01/2020 (WED) 08:00 ~ 04/07/2020 (TUE) 23:59 local time

Features:

- April Fool's Day UI: We will have a new circus theme to celebrate April Fool's Day. The color blocks will change to playing cards!
- April Fool's Day Special Guest: Joker. When you have passed through 20 gates in a row, you will meet Joker. Joker will help you to skip to next level or back to previous level (up to two) !

Rewards:

- 3 x Coins when passing through a gate
- Special box is available to buy for a limited time during the event:  
Content: Smash x 10, Slow x 10, diamond x 10  
Price: USD\$5

Team:

- Engineers x 4
- Designer x 2
- Writer/Event manager x 1

### 3. Summer Time



(concept pictures)

Date + Time:

- 07/01/2020 (WED) 08:00 ~ 07/07/2020 (TUE) 23:59 local time

Features:

- Summer Time UI: We will have a new summer theme to celebrate summer. The color blocks will change to ice cream!
- Summer Time Special Guest: Mr. Sunshine. When you have passed through 20 gates in a row, you will meet Mr. Sunshine. Mr. Sunshine will help you to skip to the next level.

Rewards:

- 2 x Coins when passing through a gate
- Special box is available to buy for a limited time during the event:  
Content: Smash x 10, Slow x 10, diamond x 10  
Price: USD\$5

Team:

- Engineers x 5
- Designer x 1
- Writer/Event manager x 1

#### 4. StrangeRoad Anniversary



(concept pictures)

Date + Time:

- 09/01/2020 (TUE) 08:00 ~ 09/07/2020 (MON) 23:59 local time

Features:

- StrangeRoad Anniversary UI: We will have a 8-bit theme to celebrate StrangeRoad's first anniversary!
- StrangeRoad Anniversary Special Guests: StrangeRoad team. When you have passed through 20 gates in a row, you will meet one of our StrangeRoad team members. They will help you to skip to the next level.

Rewards:

- 2 x Coins when passing through a gate
- Special box is available to buy for a limited time during the event:  
Content: Smash x 10, Slow x 10, diamond x 10  
Price: USD\$5

Team:

- Engineers x 4
- Designer x 2
- Writer/Event manager x 1

#### 5. Halloween



(concept pictures)

Date + Time:

- 10/26/2020 (MON) 08:00 ~ 11/01/2020 (SUN) 23:59 local time

#### Features:

- Halloween UI: The background will turn purple and the road will turn yellow, because this color scheme is very Halloween atmosphere. Some bats will fly on the background. The ball will become a pumpkin, rolling along the road.
- Halloween Special Guest: considering the fusion of Eastern and Western cultures, we add two Chinese legendary ghosts as NPCs (non-player characters). Black and white wuchang in the Chinese legends are the messengers of underworld that will send the soul of the dead to the underworld.

In the story the white wuchang's weapon is an iron chain, so the white wuchang in the game will walk around the screen, occasionally throwing a chain. If the player is hit by the chain, the player will be pulled to another place on the screen.

In the story the black wuchang's weapon is a black sickle, so the black wuchang will wander in the maze. Once the player encounters black wuchang, the player will be sent to the underground world, which is the end of the game.

#### Rewards:

- 3 x Coins when passing through a gate
- Special box is available to buy for a limited time during the event:  
Content: Smash x 10, Slow x 10, diamond x 10  
Price: USD\$5

#### Team:

- Engineers x 4
- Designer x 2
- Writer/Event manager x 1

## 6. Holidays 2020



(concept pictures)

Date + Time:

- 12/25/2020 (FRI) 08:00 ~ 12/31/2020 (THU) 23:59 local time

Features:

- Holidays 2020 UI: We will have a new snowing theme to celebrate holidays 2020. The color blocks will change to Snowman!
- Holidays 2020 Special Guest: Reindeer. When you have passed through 20 gates in a row, you will meet Reindeer. Reindeer can help you to skip to the next level.

Rewards:

- 4 x Coins when passing through a gate
- Special box is available for sale for a limited time during the event:  
Content: Smash x 20, Slow x 20, diamond x 20  
Price: USD\$5

Team:

- Engineers x 5
- Designer x 1
- Writer/Event manager x 1

## **Appendix A: Work Schedule**

<b>Features</b>	<b>Goal</b>	<b>Deadline</b>
Currency System	Coin Collect	Week 9
	Coin Display UI	Week 10
	Smash Item effect	Week 9
Item System	Item Button UI	Week 10
	Slow Item	Week 11
	Diamond Item	Week 12
Other gameplay	Checkpoint mechanism	Week 11
Demo	Midterm Video recording	Week 10
	Midterm Demos rehearsal	Week 10
Analytics	Analytics in clients	Week 12
	Analytics backend	Week 13
Live Ops & Update System	Live Ops backend	Week 14
	Update backend	Week 14
UI	Basic UI (pause, level, stats, etc)	Week 14

## ***Appendix B: Midterm Feedback***

Feedback from other teams

HungerTraverl

1. Continue smashing
2. Add difficulty by time
3. Can't change switch is too close. (smaller collider)
4. Add hint
5. Buy revive card

Panda Dodge

1. Kind of Slow
2. Try to add speed-up zone

Number6

1. Increase speed
2. Coin distribution
3. Tutorial
4. Level of items (5s, 10s)
5. Complexity is too low.
6. Speedup item
7. Bug red disappear

Noob Studio

1. Hint item available
2. Item cost hint.

Others

try to make it faster and place more twists and turns from Skirmish Team

tap twice and make the ball jump through from TA

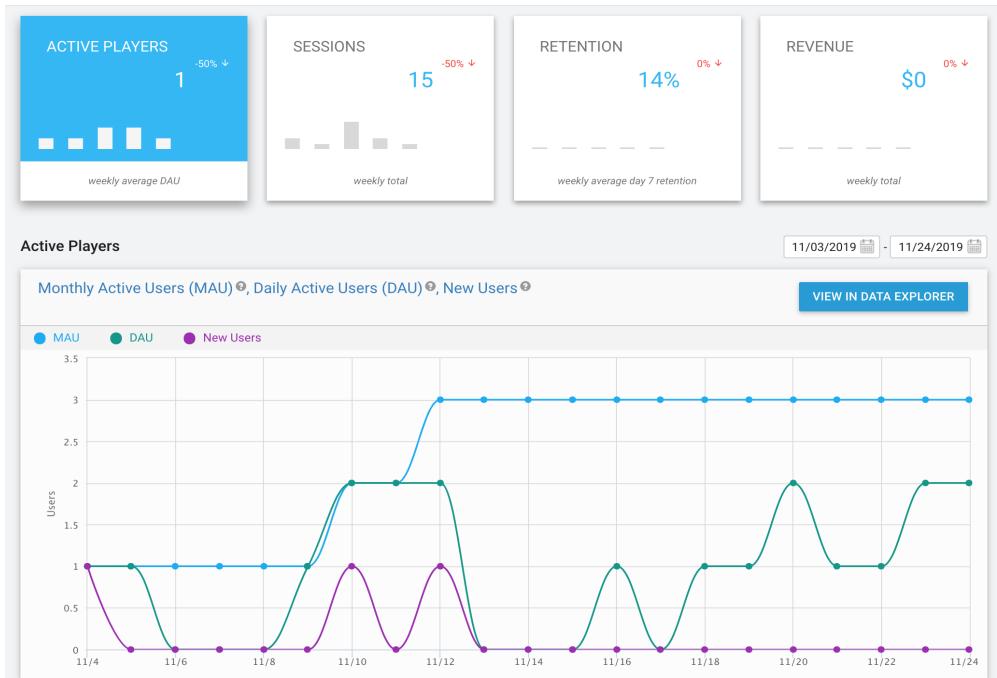
add some levels, add color contrast, also add checkpoint to give points after reaching certain points and display on screen from Greedy7

After certain time of period, try to increase game speed from Hunchmen

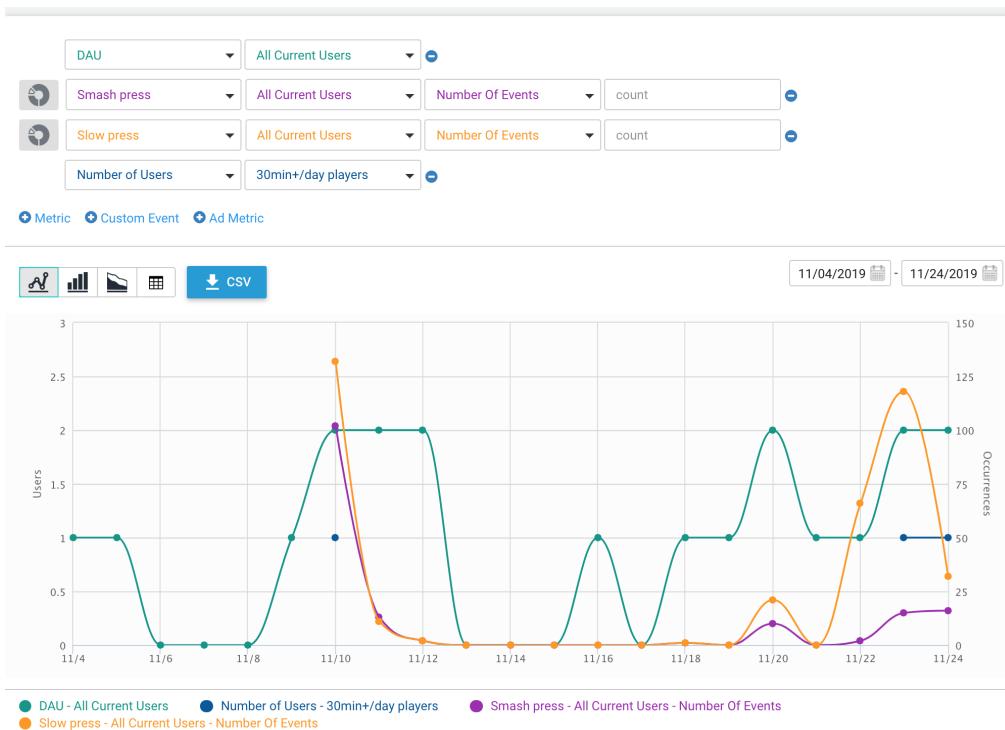
try to increase item button lightness and put them at a better position from Noob Studio

## ***Appendix C: Unity Analytics***

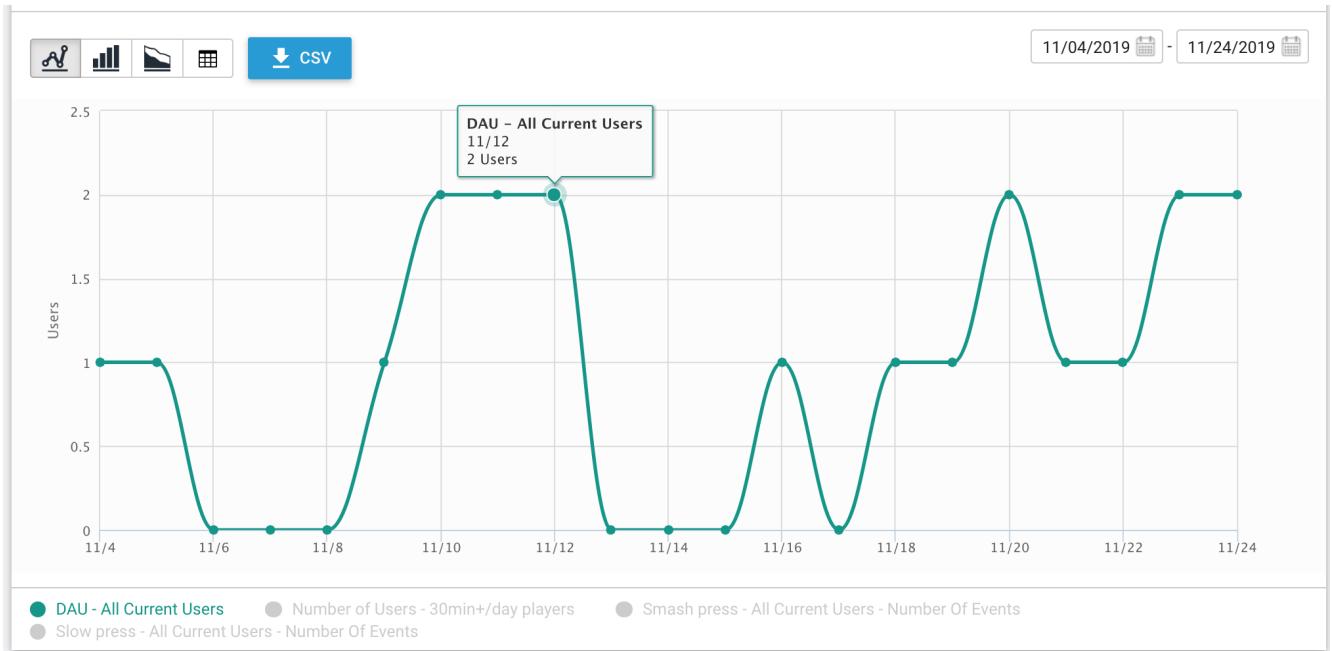
Screenshots:



a. Unity Analytics Dashboard overview (11/04/2019 - 11/24/2019)



b. Data Explorer overview (11/04/2019 - 11/24/2019)



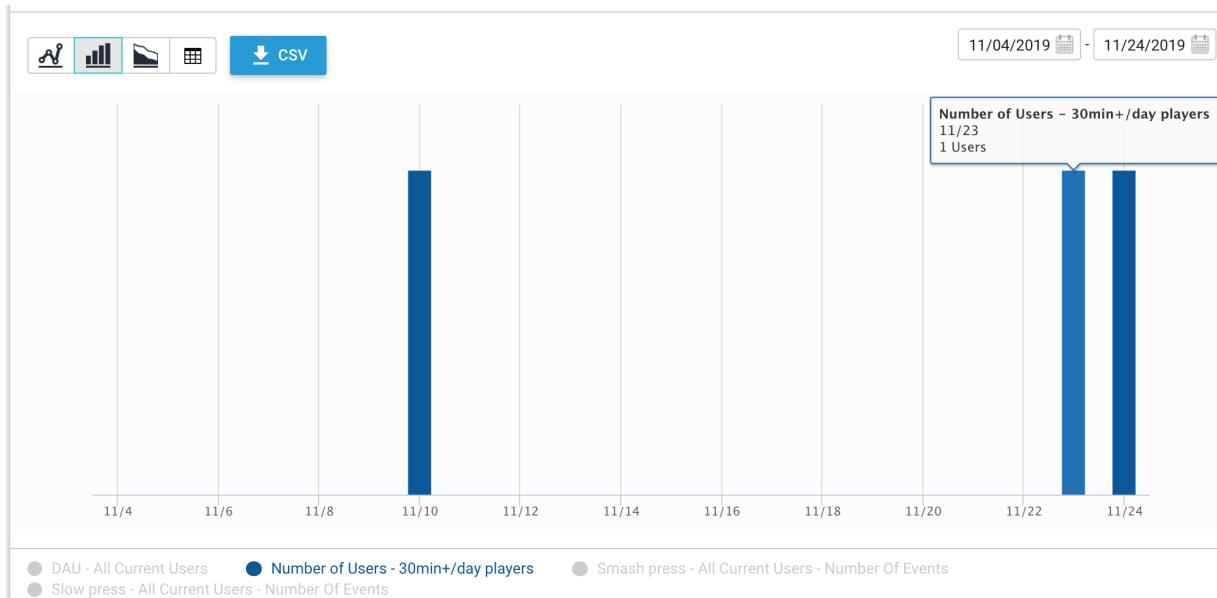
### c. Daily Active Users (11/04/2019 - 11/24/2019)

Unity Dashboard   Develop   Operate   Acquire   ?   All Orgs ▾

Segment	Type	Description	Count	Action
Minnows	Monetization	Currency in your app. They have spent less than \$5 in their lifetime, so these users should be incentivized and encouraged to make additional purchases.		
Never Monetized	Monetization	These are users who have used your app, but have never spent real currency. You can encourage them to spend through targeted offers, or you can generate revenue by targeting them with in-app advertisements.	2	
All Spenders	Monetization	Spenders who had any verified or unverified monetization in their lifetime		
Android Users	Platform	Users who are currently using the Android version of your application.		
iOS Users	Platform	Users who are currently using the iOS version of your application.	1	
30min+/day players	Custom	users play more than 30 minutes today	1	

**NEW SEGMENT**

d. In the last line, we created a custom segment "30min+/day players" to track users who play more than 30 mins today.



● DAU - All Current Users    
 ● Number of Users - 30min+/day players    
 ● Smash press - All Current Users - Number Of Events  
● Slow press - All Current Users - Number Of Events

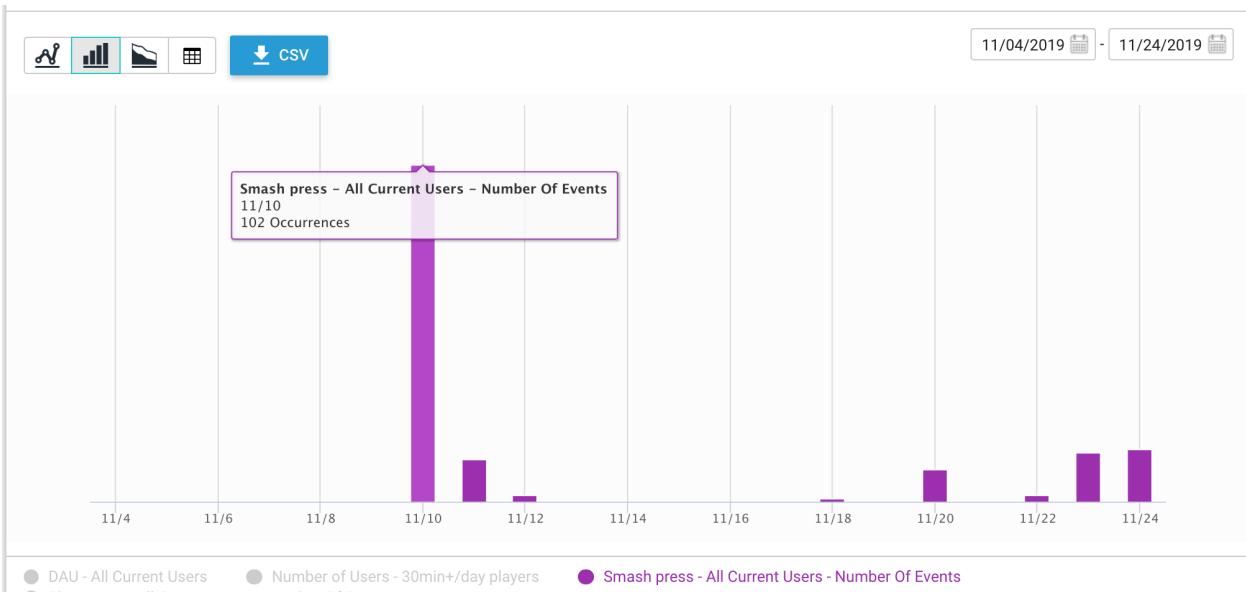
e. *Number of users who play more than 30 minutes today (11/04/2019 - 11/24/2019)*

The screenshot shows the Unity Dashboard interface with the "Event Manager" tab selected. On the left, there's a sidebar with links like Monetization, Optimization, Analytics, Overview, Data Explorer, Funnel Analyzer, Segments, Livestream, Raw Data Export, Market Insights, Settings, and a CLEAR ALL EVENTS button. The main area displays a table of events under the "Validator" section. The table has columns for Time, Category, Action, and Platform/SDK Version. The events listed are:

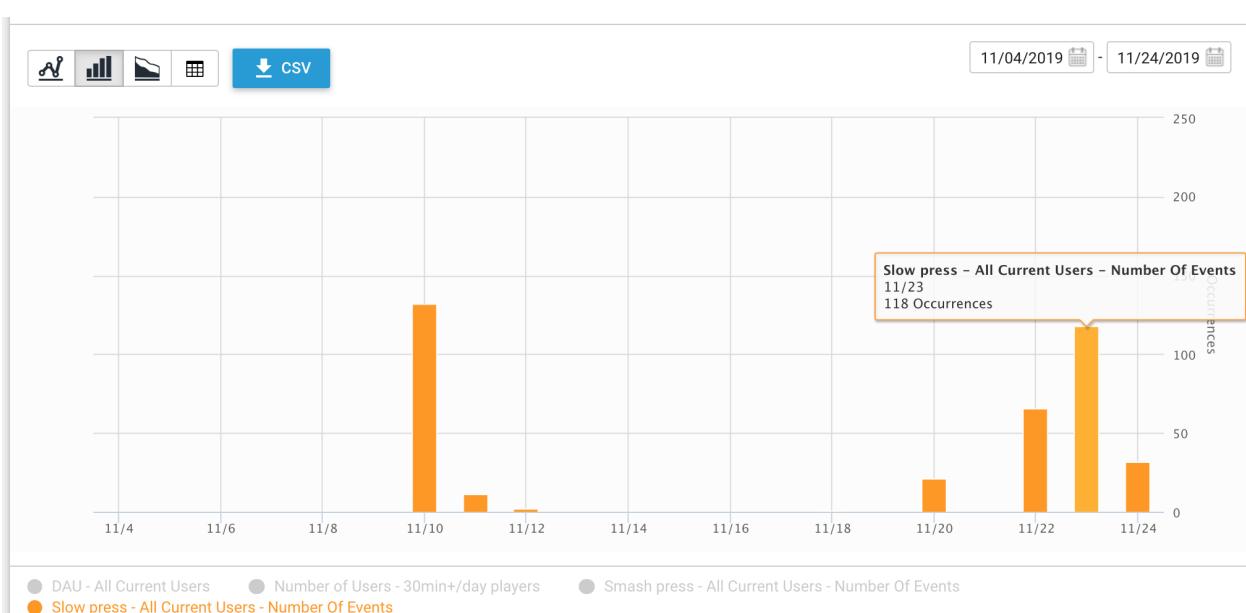
Time	Category	Action	Platform/SDK Version
11/11/2019 00:27:53	Core	appRunning	Platform: OSXEditor SDK Version: u2018.4.9f1
11/11/2019 00:25:57	Custom	Smash press	Platform: OSXEditor SDK Version: u2018.4.9f1
11/11/2019 00:25:56	Custom	Smash press	Platform: OSXEditor SDK Version: u2018.4.9f1
11/11/2019 00:25:55	Custom	Slow press	Platform: OSXEditor SDK Version: u2018.4.9f1
11/11/2019 00:25:55	Custom	Smash press	Platform: OSXEditor SDK Version: u2018.4.9f1
11/11/2019 00:25:53	Core	appStart	Platform: OSXEditor

Below the table, there's a "Custom Events" section with a "SAVE CHANGES" button and tabs for "Events & Parameters" and "Status".

f. *Event manager shows the custom events and parameters from our game, happens instantaneously*



g. Special item[Smash] press (11/04/2019 - 11/24/2019)



h. Special item[Slow] press (11/04/2019 - 11/24/2019)