



For (I, Game & Robot) Hackathon
Game Design Planning
By A.Nasser 10/2022

INTRODUCTION

Game Title: Pixy Roads

Target platform: Mobile – iOS & Android

In game currency: Cash (off chain)

Web3 Token: PIX

**Blockchain: Need some research, Top 20 Web3 games built on these
blockchains: FLOW – BNB – WAX – POLYGON – RONIN**

Game background

The game starts when the player arrive to (Shanghai) searching for work, After a while with a help from some friends he get a car from (PIX Moving) and rent a garage to work with DiDi app, With time one of his friends tells him about the Racing battle and the rewards that he will get when he wins.

Game characters

Player – Friends he meet at Shanghai.

Game Objectives

The player can choose one or multiple objectives to play in the game:

- DiDi driver and spend his whole time completing tasks and collecting cash.**
- Try to win every multiplayer race he can join.**
- Collect every battle card in the game.**
- Customize his car and share the new styles with his friends.**
- Upgrade his garage with cool furniture.**

Unique Selling Points

- **Stunning City of Shanghai player can wander around.**
- **New MashUp game idea.**
- **Advanced traffic cars AI.**
- **Realistic driving in town.**
- **Competitive multiplayer racing.**
- **Wide range of race battle cards player can collect.**
- **Lot of options to customize Robo-Vehicle Exterior and Interior.**
- **Player can earn money by selling NFT battle cards.**
- **Every player can spend hours upgrading his Robo-Vehicle & Garage as he like.**

Target audience

-The game is targeting a wide variety of mobile gamers:

1-Sims players who want to wander around in the beautiful city of (Shanghai) as DiDi drivers.

2-Competitive players who want to win and collect cards in the race tracks.

3-Players who want to earn money from selling rare cards and as NFTs.

GAMEPLAY

Game types

Simulator – Race – Cards – Customization

(Pixy Roads) is a single Player/Multiplayer MashUp car game, With 4 different genres in one game.

#Card battle racing game (Multiplayer) Mixing card battle game with racing game.

#Car simulator (Single player) Located in the beautiful city of (Shanghai).

#Customization: With cash the player can customize his Robo-Vehicle & Garage.

-Garage: Large empty place when the player starts playing the game, After collecting cash from (DiDi work and Winning racing cards battles), Player can upgrade his/her garage with furniture and other sort of things.

-Robo-Vehicle: When the player starts playing the game he/she own a normal Robo-Vehicle, and after progressing through the game he/she collect cash and with it be able to customize Robo-Vehicle interior and exterior:

1-Change Robo-Vehicle body

2-Change Robo-Vehicle colors

3-Add exterior parts

4-Add interior parts

5-Buy Robo-Vehicle stickers

6-Change Robo-Vehicle light colors

DiDi gameplay

- The player uses DiDi to take a trip, and drive in the city streets to his destination.**
- Driving the vehicle is more realistic compared to the race scene.**
- The vehicle can reverse and completely when the player holds the brake button.**
- Traffic violation system (the traffic system is by cameras in street) if camera catch you making something wrong it will give you ticket.**

How much cash player will get from completing DiDi trips

- Short trips (15-25) cash**
- Trips (40-60) cash**
- Long trips (80-120) cash**

(Depends on the length of the trip)

List of traffic violation fines

- Failing to stop at a red light 500 cash**
- Driving over the speed limit 300 cash**
- Blocking street for X time 200 cash**
- Colliding with other cars 100 cash**
- Driving in other road 300 cash**
- Driving the wrong way 300 cash**

How much is the garage rent and car installments

- Garage rent 300 cash every month**
- Robo-Vehicles installments 300 cash every month**

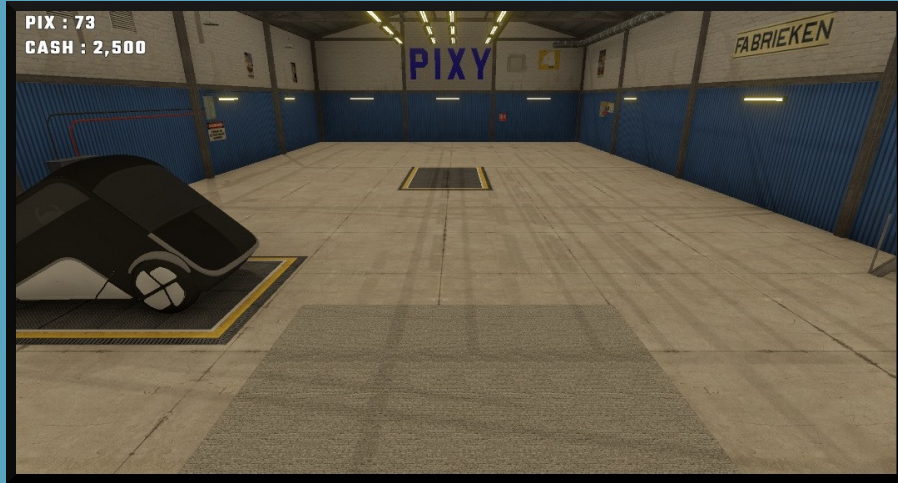
Race gameplay

-The player vehicle will move forward automatically, this will allow the player to focus more on using the battle cards.

The player can steer the wheels left and right, and use the brake to drift on track curves.

Car garage: Huge empty place when player starts the game, Filling the garage with furniture needs Cash.

Empty garage when starting the game:



Buying furniture with cash:



TECHNICAL

What game Engine

-Unity engine (universal render pipeline build) Version 2022.1.20

Aspect ratio

-16:9 is the most popular aspect ratio, due to its considerable width, this format is considered panoramic. In other words, it captures a wider area than other aspect ratios.

Multiplayer System

Unity Game Server Hosting.

What system to use for race cars AI

Unity asset: iRDS – Intelligent Race Driver System

What AD services to use

-Unity ads.

Ads in the game

-Ads when playing as a DiDi driver shown when stopping at traffic lights.

How to manage play testers

-Using Unity Automated QA services

How to manage game analytics

-Using Unity Analytics services

Size of the mobile game Build

From 2.5 to 4 gigabyte

What data will be stored on the chain

-PIX token

-NFT race battle cards

What data will be stored off chain and where

#These data will be stored in Unity Gaming Services (Cloud Save)

-Collected Cash

-List of items player bought (car customization-garage furniture-music tracks)

-Player's achievements & skill points

-Player's DiDi progress

Saving players' progress

-Anonymous authentication introduces players to your game and provides a frictionless First Time User Experience. A First Time User Experience is the initial interaction with the application. A player can go through the first few levels using an anonymous account, so game servers can still track the progress while the player gets a chance to try out and explore your game.

Once a player becomes invested in your game, prompt the player to upgrade their anonymous account to sign in with a platform account using (Unity Cloud Save).

Building shanghai city

- 1-Get shanghai city map**
- 2-Select area in city**
- 3-Create a terrain inside unity engine for selected area**
- 4-Add 3D roads models**
- 5-Add prototype buildings and props**
- 6-Add traffic system**
- 7-Test gameplay and Iterate**
- 8-Buy ready city buildings and prop 3D models from stores**
- 9-Customize the buildings and props fbx and textures**
- 10-Add visual effects**
- 11-Optimize playing performance**
- 12-Test gameplay and Iterate**

List of city 3D models to buy and to create

3D models to buy

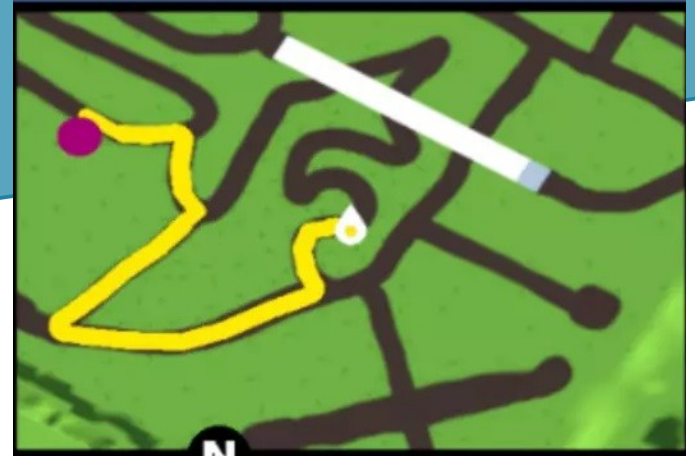
- Buildings**
- Roads**
- Side walks**
- City props (lights-signs-traffic lights-traffic cameras-trees-traffic cameras-etc...)**
- Garage furniture**

3D models to create

- Robo-Vehicles**
- City Terrain**
- Traffic cars**
- Robo-Vehicles customization parts**
- Race tracks**

List of visual effects in the game

- Unity Post processing stack (Bloom-Ambient Occlusion-Anti aliasing-Color Adjustments)
- Rain
- Steam
- Snow
- Fog
- Tree wind
- Robo-vehicle using battle card in race (nitro-shield-slow...etc)
- UI visual effects (pressing button-collecting cash-win race-use cards)



Navigation in city

Will be using a Mini Map system tool to guide the player to his destination.

List of in game locations

- Garage: player home and place to customize the car and garage**
- City (Shanghai) where player work as a DiDi driver to collect cash**
- Race tracks: where player race against other players and use race cards to win prizes**

BLOCKCHAIN

How players can earn money

By selling (NFT battle cards), the player gets a random battle card every time he opens a Gift box, rare cards will be highly desirable.

DEVELOPMENT AND MARKETING

Development cost

Regardless of the type and size of the game you develop, there are several factors that influence the costs, which apply to almost all mobile game development.

Pre-Development Costs

For the game development process to be well structured, game developers will create a strategy in the form of a GDD document that will include all the game details. This step is essential because it will be the basis of the whole project.

Marketing

Even if your mobile game is fun and attractive, it still needs smart marketing to be known. After you have invested a few thousand dollars in mobile game development costs, you need to think seriously about investing in advertising to get your investment back and make a profit. To fit your budget, it is good to add the cost of marketing to the cost list from the beginning.

The marketing budget is so important that big publishers sometimes invest more in advertising than in mobile game development costs. But in ordinary cases, the marketing cost reaches at least 30% of the overall budget to reach the target audience and earn a profit.

Studio team and every role

(Project manager)

Role: Make detailed project GDD – Planning and monitoring the project – Build communication lines with game stores, media, blockchain companies – Ensure workflow and deadlines are met – help other sections with problems they have.

(Game designer)

Role: Design the whole economy – Design the DiDi game loop – Design the cards race gameplay.

(3d modeler & artist)

Role: Build 3d models: City terrain – Street traffic cars – Track for multiplayer race – NEV car interior & exterior accessories parts.

(Full stack developer)

Role: All blockchain related tasks.

(C# programmer)

Roles: Build car controller – City cars AI – DiDi missions system – Off chain economy – Player leaderboard & achievements – Multiplayer networking – NEV car customization system – Garage upgrade system

(Q&A)

Role: Test the game and give feedback – Build a social community around the game and collect data.

(Hire remotely for a short period of time, no needs to be full time employees)

(UI designer)

Role: Develop user interface.

(2d artist)

Role: Design game logo & banners – race cards – game icons – characters avatars.

(Sound designer)

Role: Sound effects & music tracks.

(Effects designer)

Role: Create game visual effects

(Estimated cost by salary for 1 year)

SUBJECT TO CHANGE BEFORE BEFORE FINAL SUBMIT

-Project manager: $5,000 * 12 = 60,000$ \$

-Game designer: $3,000 * 12 = 36,000$ \$

-3d modeler & artist: $3,000 * 12 = 36,000$ \$

-Full stack developer: $4,000 * 12 = 48,000$ \$

-C# programmer: $4,000 * 12 = 48,000$ \$

-Q&A: $2,500 * 12 = 30,000$ \$

Freelancers (one time payment)

-UI designer: 3,000 \$

-2d artist: 5,000 \$

-Sound designer: 5,000 \$

-Effects designer: 5,000 \$

-Software licenses and additional costs: 5,000 \$

Assets from (Unity Asset Store) can be used to speedup building the game, Each asset is highly developed by professionals and can be added to the final build

NOTE : WE ARE TARGETING 2 TYPE OF ASSETS :

1-C# SCRIPTS (CAR CONTROLLER – TRAFFIC SYSTEM).

2-FBX MODELS (BUILDINGS – PROPS).

THESE ASSETS CAN BE EASILY MODIFIED BY THE TEAM PROGRAMMER AND ARTIST, AND WONT BREAK THE PROJECT IN THE FUTURE BECAUSE (UNITY ENGINE) BUILT FROM GROUND TO USE C# SCRIPTS AND FBX FORMAT.



3/38



Realistic Car Controller

BC BoneCracker Games

★★★★★ (428) | ♥ (2998)

\$50

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Extension Asset

File size 317.2 MB

Latest version 2.50

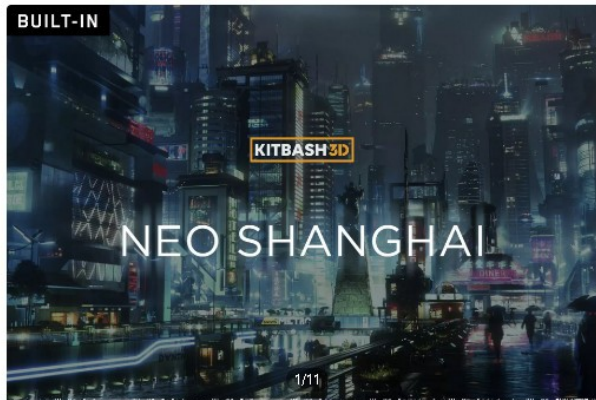
Latest release date

Supported Unity versions

Support

Reviews ★

Add



1/11



Neo Shanghai (Built-In)

K KitBash3D

(not enough ratings) | ♥ (140)

\$199

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Site

File size 1.0 GB

Latest version 1.1

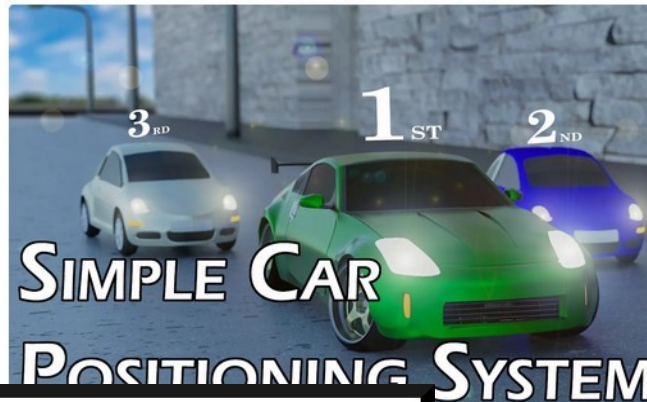
Latest release date May 19, 2021

Supported Unity versions 2019.3.13 or higher

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Simple Car Positioning System

N Nanousis

★★★★★ (12) | ♥ (20)

\$9.99

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Extension Asset

File size 83.9 MB

Latest version 2.0

Latest release date Jan 21, 2021

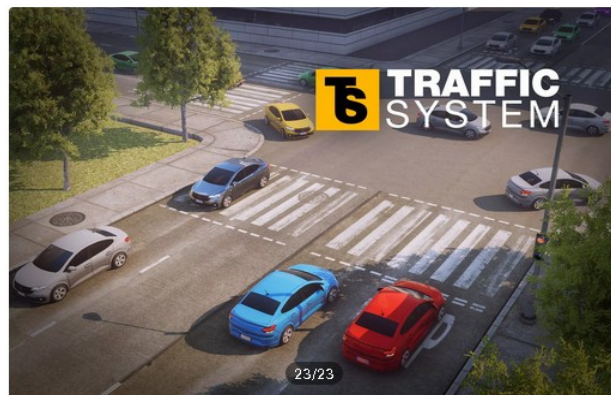
Supported Unity versions 2018.3.0 or higher

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Reviews ★★★★★

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Mobile Traffic System

G Gley

★★★★★ (36) | ♥ (472)

\$60

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Extension Asset

File size 86.2 MB

Latest version 1.3.7

Latest release date Sep 6, 2022

Supported Unity versions 2019.4.40 or higher

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Reviews ★★★★★

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NewGen: Urban

R ReversedInt

★★★★★ (27) | ♥ (97)

\$44.99

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Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Site

File size 3.3 GB

Latest version 1.0

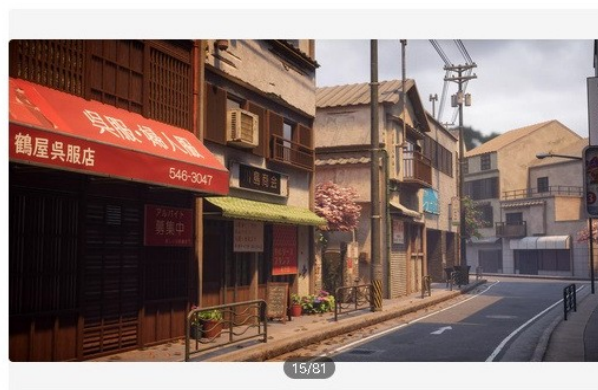
Latest release date

Supported Unity versions

Support

Reviews ★★★★★

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JAPANESE CITY | Modular Pack

SS Sherman Waffle Studios

★★★★★ (16) | ♥ (749)

\$34.99

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Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Site

File size 2.1 GB

Latest version 1.34

Latest release date Jan 10, 2022

Supported Unity versions 2020.3.14 or higher

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Reviews ★★★★★

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Modern City Downtown with Interi...

LS Leartes Studios

(not enough ratings) | ♥ (28)

\$149.99

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Site

File size 2.3 GB

Latest version 1.0

Latest release date Aug 10, 2022

Supported Unity versions 2020.3.37 or higher

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Japanese House Package

RS Reberu Game Studio

(not enough ratings) | ♥ (50)

\$69

Taxes/VAT calculated at checkout

Product Information

License agreement [Standard Unity Asset Store EULA](#)

License type Site

File size 77.0 MB

Latest version 1.0

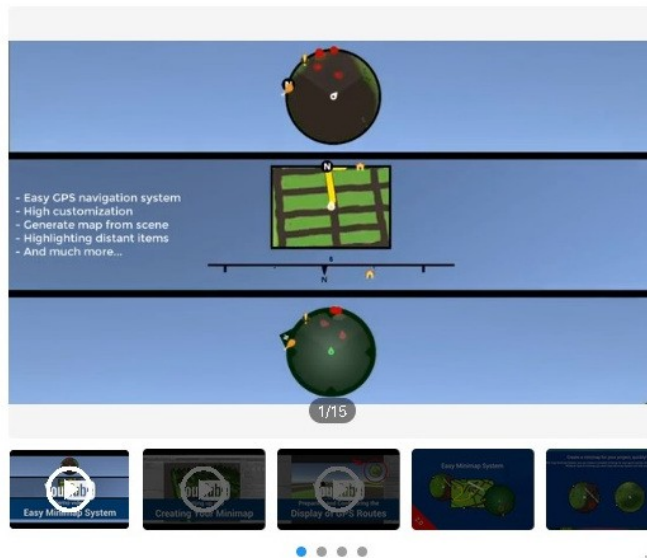
Latest release date Feb 24, 2022

Supported Unity versions 2019.4.17 or higher

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Easy Minimap System MT - GPS, M... ×

MA MT Assets

★★★★★ (24) | ♥ (215)

\$18.90

Taxes/VAT calculated at checkout

Product Information ^

License agreement [Standard Unity Asset Store EULA](#)

License type Extension Asset

File size 212.5 MB

Latest version 2.4.2

Latest release date May 24, 2022

Supported Unity versions 2019.4.36 or higher

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Reviews ★★★★★ ▼

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