DeAuto Hackathon Game Design Planning

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Note: This is not yet the final submission, if you are viewing this and you are a hackathon participant and have a recommendation or a feature design plan, please contact me on discord:

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Background:

Rise of Robos is a play-2-earn 3D multi-player PvP mobile game where players fight PvP battles, take part in events and earn game native token $RBB or explore and play solo in exploration mode.

Rise of Robos is inspired from multiple IDLE RPG games and RPG games and combines the experience into a PvP P2E game with an additional exploration mode that is played solo.

P2E PvP Narrative Framework

Combining the experience of both PvP game and blockchain P2E Idle RPG games, every player has an NFT and aims to increase the performance of the NFT, compete in events and make the NFT generate more tokens.

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Game Story

2170, Zeros Continent. The Establishment of Xeronia

Xeronia, a city located hundreds of miles away from other cities was founded in 2170 by four robo car engineers. Due to the existence of rich lithium and metal resources, four engineers established a city that attracted all large robo car production companies.

Shortly after establishment the city prospered and became a lively city where almost all cars moving around are robo cars move on automated jobs and complete their tasks.

The city prosperity and the majority of its citizens being robo car engineers, car tool stores, car designers and multiple revolutionary new types of robo cars took place.

The fast development of the city and the enormous amount of car engineers and Ai engineers helped the growth of new model designs that took over the city, designers started to develop designs and increase robo car efficiency.

The city became the world's first producer for robo cars, and many companies competed for producing the best car qualities. The fierce competitions led to the rise of a new form of sports "Robo battles" where robo vehicles get into an arena and use their attributes to destroy other robos.
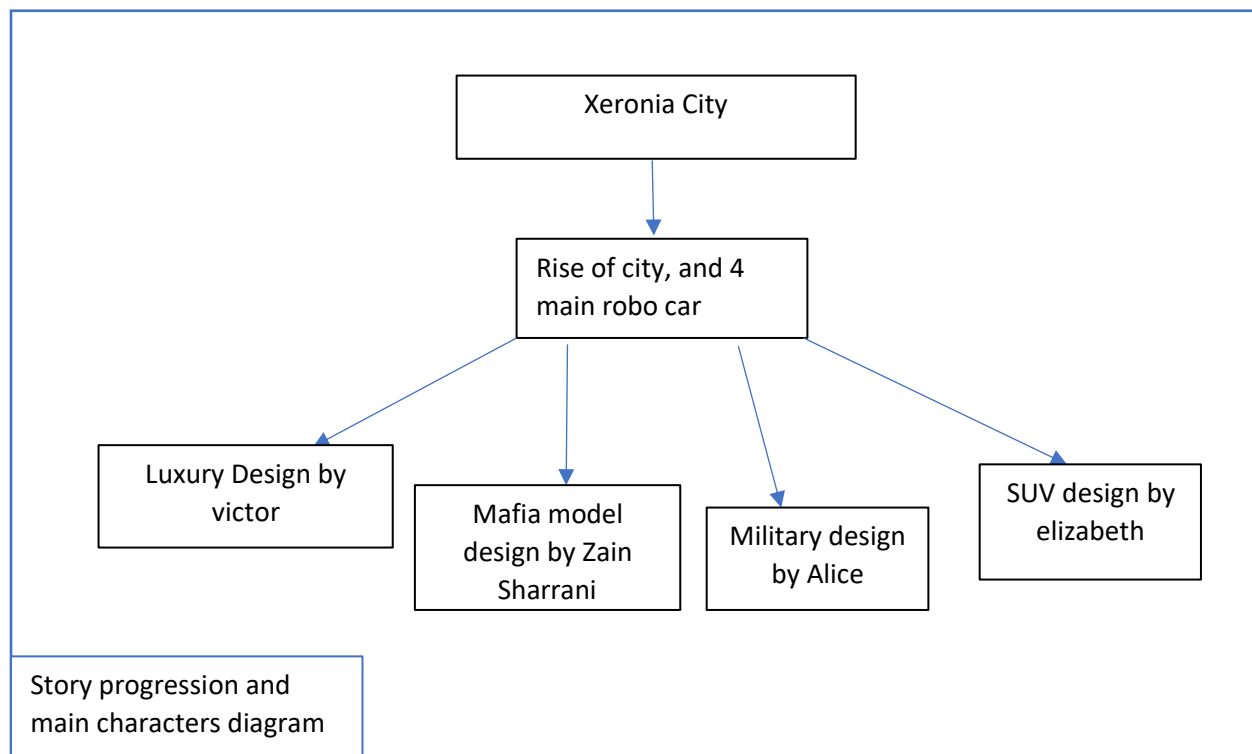
The rise of battle arenas, a place where cars of multiple designs compete:

Not too long after the city establishment, the massive majority of robo car engineers brought in the lights to a totally new form of sports "Battle Arenas", in the battle arenas robo cars of multiple designs join in the

Characters:

1- **Victor Medvid**: Victor is one the founders of Xeronia city and the creator of the luxury design model.

2- **Zain Sharrani**: Zain is the designer behind the Mafia design model

3- **Elizabeth:** Elizabeth, is an American engineer who created the design of Military NEV cars

4- **Alice: Alice is a mechanical and AI engineer and the developer of the SUV model.**

5- Zoe: A bot that guides players into the game.

Victor Medvid	Elizabeth
One of City Founders, Designer of the Luxurious car Model. Ai Pic.	Professional car engineer Military Model designer. Ai Pic

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│                  │     Xeronia City     │                    │
│                  └──────────────────────┘                    │
│                             │                                │
│                             ▼                                │
│                  ┌──────────────────────┐                    │
│                  │  Rise of city, and 4 │                    │
│                  │    main robo car     │                    │
│                  └──────────────────────┘                    │
│                                                              │
│  ┌──────────────┐  ┌──────────────┐  ┌──────────┐  ┌────────┐│
│  │ Luxury Design│  │ Mafia model  │  │ Military │  │SUV     ││
│  │  by victor   │  │ design by Zain│ │ design   │  │design  ││
│  └──────────────┘  │  Sharrani    │  │ by Alice │  │by      ││
│                    └──────────────┘  └──────────┘  │elizabeth││
│  ┌───────────────────┐                             └────────┘│
│  │Story progression  │                                       │
│  │and main characters│                                       │
│  │diagram            │                                       │
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Theme, and the importance of characters in the game:

Rise of Robos is PvP NFT game that has story behind, the game theme is to develop and enhance the performance of a robo car, gain more attributes and use skills to fight and engage into battles with other players.
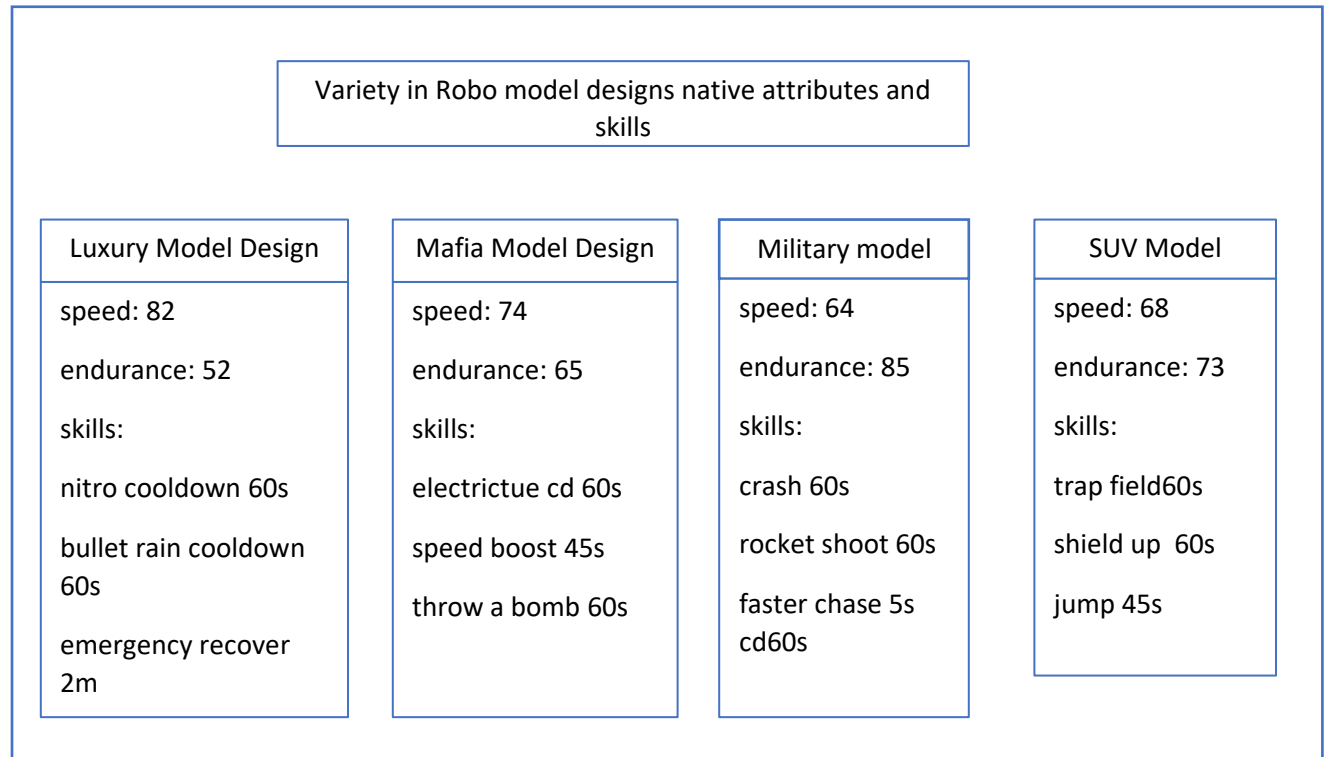
Theme Keywords: Sci-Fi, Future, Cars, PvP, Battles, strategy, NFT game, P2E.

Game Mechanics

The game will be a 3D hyper-casual styled car fighting game, fighters will be able to engage in battles using their robo car and attack players with attributes and skills they own.
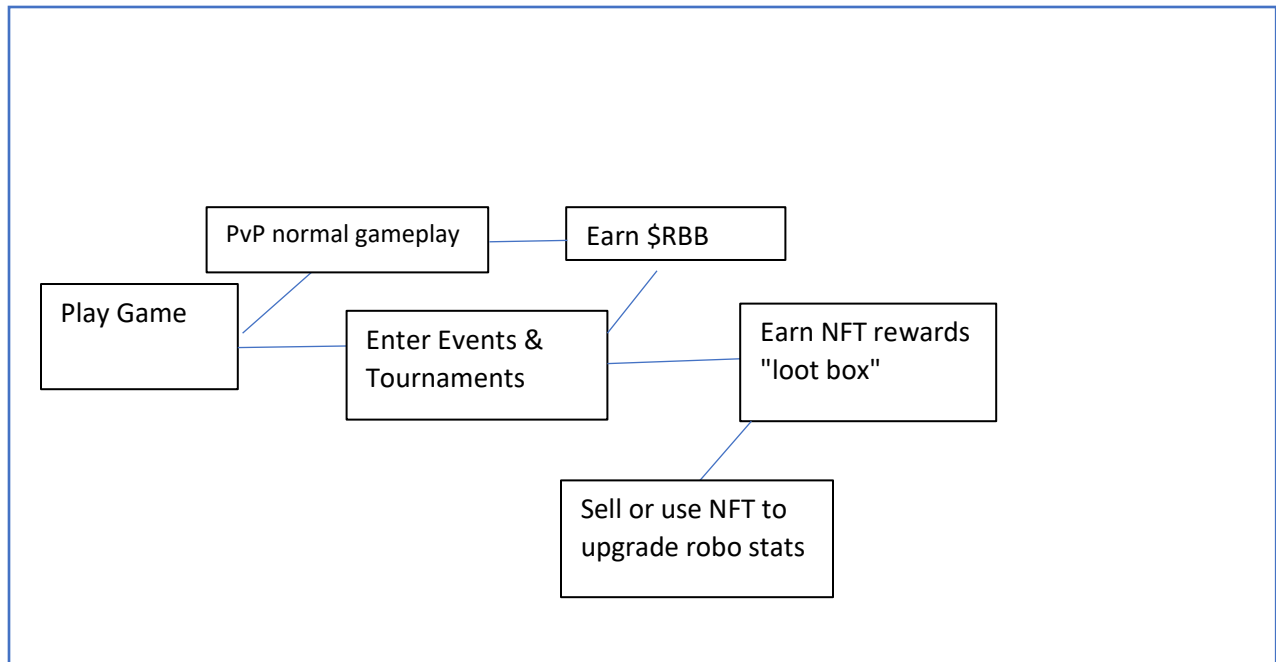
Model designs, attributes, skills and cooldown diagram:

Variety in Robo model designs native attributes and skills			
Luxury Model Design	**Mafia Model Design**	**Military model**	**SUV Model**
speed: 82	speed: 74	speed: 64	speed: 68
endurance: 52	endurance: 65	endurance: 85	endurance: 73
skills:	skills:	skills:	skills:
nitro cooldown 60s	electrictue cd 60s	crash 60s	trap field60s
bullet rain cooldown 60s	speed boost 45s	rocket shoot 60s	shield up 60s
emergency recover 2m	throw a bomb 60s	faster chase 5s cd60s	jump 45s

Factors that determine victory:

1- The Robo attributes and skills
2- Player's gameplay performance

Your usage of the your robo attributes and skills determine the outcome of the battle, you will be battling an enemy with skills and attributes that you own with your customized robo and your mission is to utilize your special skills and attributes to defeat the enemy.

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│                                                                       │
│          ┌──────────────────┐          ┌──────────────────┐          │
│          │ PvP normal       │──────────│ Earn $RBB        │          │
│          │ gameplay         │          │                  │          │
│          └──────────────────┘          └──────────────────┘          │
│    ┌────────────┐     ┌──────────────────┐   ┌──────────────────┐    │
│    │ Play Game  │     │ Enter Events &   │   │ Earn NFT rewards │    │
│    │            │─────│ Tournaments      │───│ "loot box"       │    │
│    └────────────┘     └──────────────────┘   └──────────────────┘    │
│                              ┌──────────────────┐                    │
│                              │ Sell or use NFT to│                   │
│                              │ upgrade robo stats│                   │
│                              └──────────────────┘                    │
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Battle Maps:

Rise of Robos takes place 200 years in the future, you get to play in two different maps.

1- Suburb track map
2- Destroyed buildings arena

Upgrading Attributes, and new skills mechanism:

As the game progresses, and players get to participate in tournaments or gain an airdrop of a loot box NFT. Players can use the game native token to upgrade the Robo attributes or get a new skill that can drastically change the performance of the player in the game.

"Free Player" Playing without owning a Robo NFT:

If the player doesn't own a Robo NFT, the player can choose a model to play with and play with native skills and attributes.

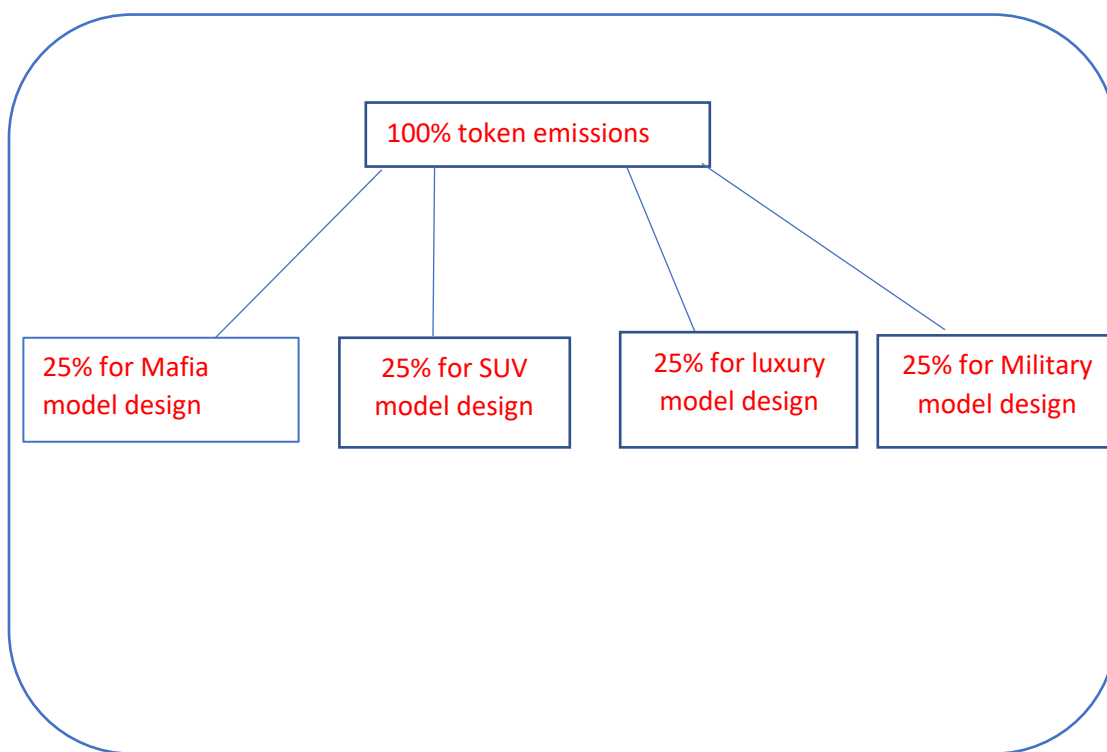The player can also rent a Robo car for a period of time.

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Short walkthrough in Tokenomics:

Four different designs, one emission rate

Before the game launch, the game will be at the pre-launch phase and early-participants will be customizing their robo vehicles and minting before the game-release. To prevent the superiority of one design over the others, the native token emission rate will be constant for every design, which means that each robo design will be getting a constant 25% of the token emissions.

During the early mint, and future coming mints there will be a calculator showing the token emission rate for every design. This will encourage users to mint the one that is at a disadvantage because it produces more native tokens and prevent a majority favoring a design over the other.

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                      ┌───────────────────────┐
                      │  100% token emissions │
                      └───────────────────────┘
        ┌───────────┬──────────┴──────────┬───────────┐
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│ 25% for Mafia│ │ 25% for SUV  │ │ 25% for luxury│ │25% for Military│
│ model design │ │ model design │ │ model design │ │ model design │
└──────────────┘ └──────────────┘ └──────────────┘ └──────────────┘
```

$RBB Token:

Players earn $RBB in two ways:

1- passive, as long as you own a Robo NFT you earn daily emissions.
2- Playing the game, winning tournaments and events.

The game is a P2E game based on an inside tokenomics ecosystem where users use tokens to mint new tools, customize new attributes.

$RBB token is used in minting tools, unlocking tool box, governance and DAO voting, it is also used to mint a new robo for future mints.

Usage and utility of $RBB token:

$RBB is used for all related game activities:

1- To upgrade the robo vehicle, player need to use $RBB.
2- To rent a robo Vehicle player need to pay $RBB.
3- Player can stake $RBB in DEX liquidity pool to earn $RBB or the DEX native token.

Game Modes

Tournament mode:

Tournaments are official game events that start in a pre-announced time, tournaments should take place with pre-made teams.

3v3 mode

3v3 mode is the main game-play version and the one that is expected to be the most popular. Three Robos team up and play the battle.

Battle Royale:

Classic battle royale mode, 2v2 and 3v3 classic battle royale where the last standing team wins.

Exploration mode:

Exploration mode is a mode to familiarize with the game and explore a city map, use skills against NPC robos and complete minimum version of quests.

exploration mode that familiarizes players to the game:

Aside to the PvP play-mode which is the core of the game, after launching the game in the phone players can choose to play an exploration mode and interact with a map, move the robo car around the city and try out the robo features on NPCs.

Core Gameplay and game interface

After connecting the wallet, and loading the game interface player is directed to the garage where the player customizes the external appearance of the Robo vehicle.

Customizing the vehicle:

Just before getting into the arena and starting your fight, whether you are a Robo NFT holder or a free player, you will be able to customize the exterior appearance of the vehicle pre-game play in the "Robo Garage".

Inside the garage, you can customize the following:

1- Car color
2- Car exterior style – each model design has more than one exterior style
3- Front color
4- Back color
5- Wheel style – multiple different wheel styles

Moving Inside the arena, PvP gameplay:

Inside the arena, every player or team are first transported to a garage, the battle starts 30 seconds after count down.

In the gameplay. Depending on the game mode, players engage in battles and start moving their vehicle around with aim to decrease the competitor players' health to 0.

Cooldown of skills:

Each skill has a certain cooldown time. The table below shows the cooldown time of each model's native skills.

Exploration mode:

In exploration mode, player is able to play the game directly and play a simple solo mode. Players don't earn $RBB when playing solo exploration mode.

3D hyper casual:

The art style of the game is 3D casual style, examples of similar art are below.

Car Design, appearance and varieties of the art style concept:

All angles shall of 3 designs shall be sharp, luxury cars can be different and can be flexible with curvy designs when designing a luxury model design robo car.

The game takes place in the future, NEV cars have various different designs. The art design of the cars shall include an NEV car with a space to install a weapon, magnet tool, and other options.

Ai generated photo, Luxury model.

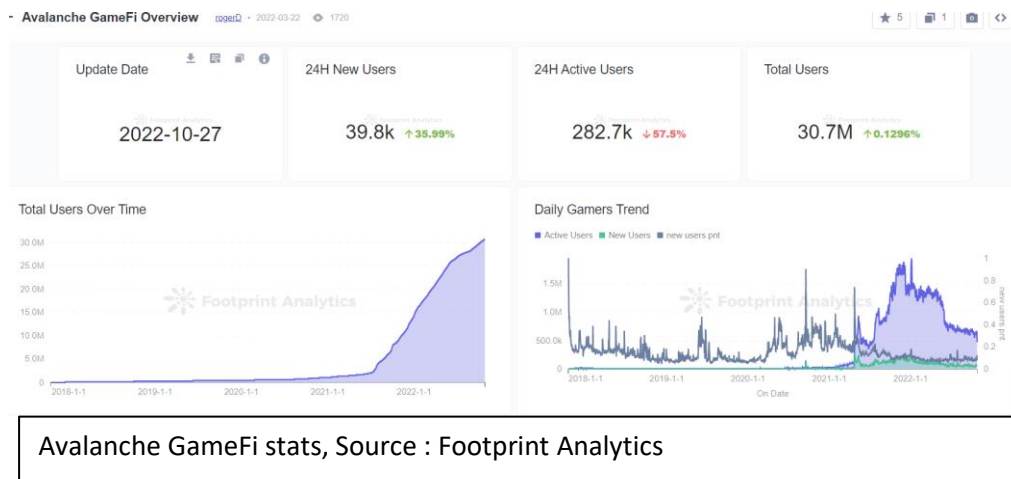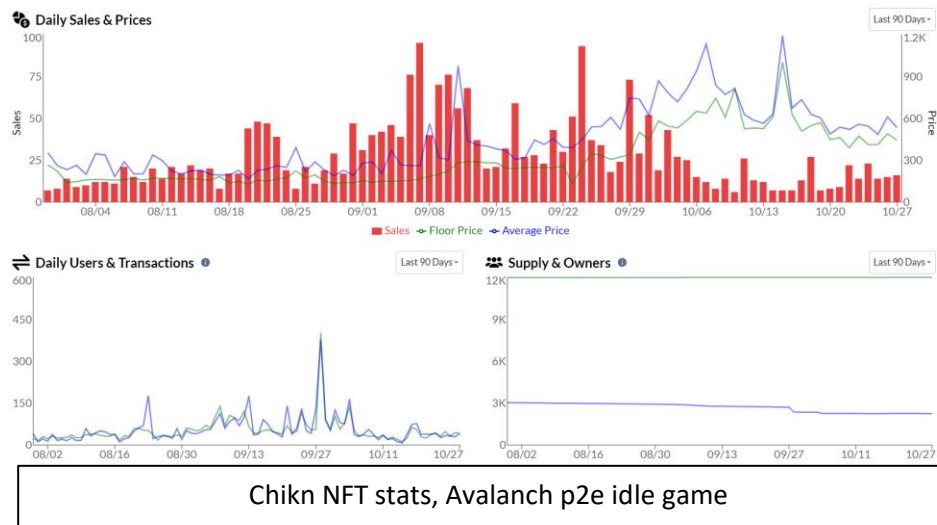| Ai Generated, Military Design | Ai Generated, Luxury design |

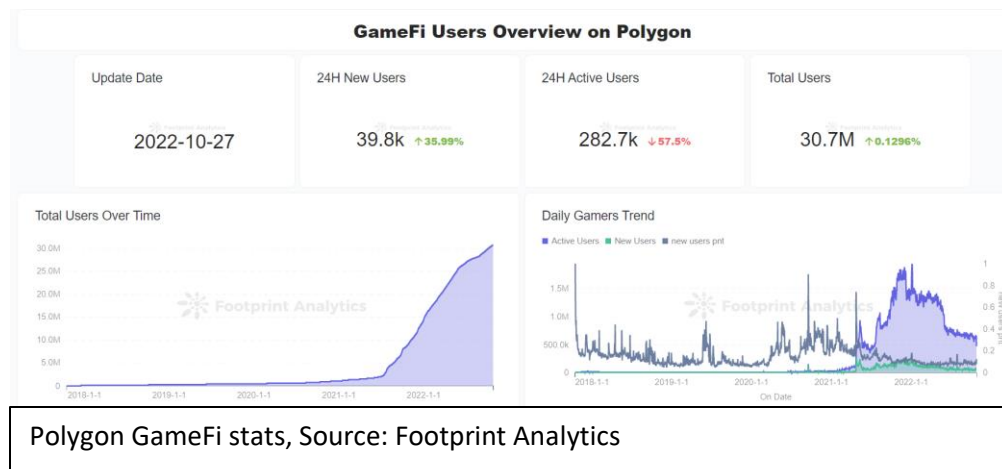City map example, in exploration mode

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Persona Research

Rise of Robos is a PvP and web3.0 NFT game, the targeted audience is:

1- Players who prefer playing PvP games

2- Players who want to try out web3.0 games

3- The users of the blockchain the game will be built on

4- NFT collectors, and NFT degens.

With the very specific audience scope above, the game has an advantage of using the community of the chain it will be built on and use the powers of the community within to increase the game reach.

A good choice of a blockchain would be Avalanche, or Polygon as both blockchains are having recent NFT trends.

Chikn NFT stats, Avalanch p2e idle game

Avalanche GameFi stats, Source : Footprint Analytics

Polygon GameFi stats, Source: Footprint Analytics

Technical Feasibility:

The game is a 3D multiplayer game, to reduce the costs of making the game and get a more professional outcome in connecting to the blockchain, the game app shall use a web3 API to ask the user to sign a gasless transaction and as the signature finished the player is inside the game.

In summary, the game development is possible by using tools to connect to the blockchain, grab the metadata and use the grabbed data to portray the design into

The game application will use moralis API to first see if the player already owns an NFT, and then upload the NFT metadata and portray it on the application.

1- Connecting to the blockchain through web3 API provider and uploading the metadata.
2- Free 2 play and earning rewards is possible by making an oracle that connects to an API, the API records the data of addresses of players who participated in the game and the oracle uses the data to mint rewards after a period of time.
3- The game play and usage of the skills and attributes require multiple tests to figure which 3D model is the best for game play. Graphics of 3D that takes less requirements is recommended so any phone user can get to play.

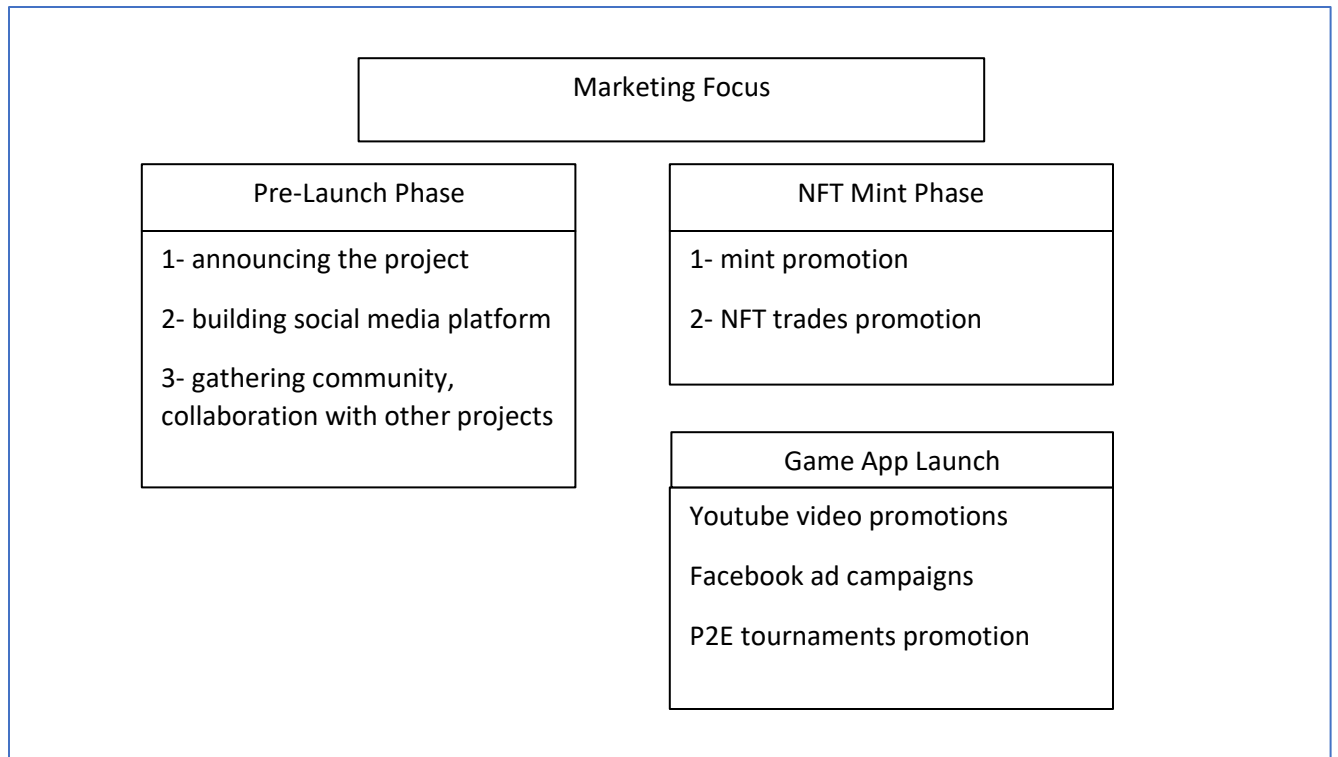## Possible risks that might affect the progress of the game:

Risks	Preventing risks steps
Smart Contract Hacks	Smart contract Audit Continuous snapshots for token holders
In-Game play hacks	A feature that stops sending data to the API oracle if the address is approved to be cheating.
Bots-Playing the game	Users have to connect wallet before playing the game.
FUD and media attacks on the project	Active Discord team. Continuous collaboration with crypto twitter influencers. Collaboration with other projects. Collaboration with blockchain big projects.
Bots playing.	There should be AI detection for bots that automatically and directly ban bots. Bots are not allowed to engage in gameplay.

Marketing

The game development team must have a marketing lead and a professional community manager who understands the needs of the community members and hire community moderators who answer game related questions.

Marketing scope:

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│                    │       Marketing Focus        │                    │
│                    └─────────────────────────────┘                    │
│                                                                        │
│    ┌──────────────────────────────┐   ┌──────────────────────────────┐ │
│    │      Pre-Launch Phase         │   │       NFT Mint Phase          │ │
│    ├──────────────────────────────┤   ├──────────────────────────────┤ │
│    │  1- announcing the project    │   │  1- mint promotion            │ │
│    │                               │   │                               │ │
│    │  2- building social media     │   │  2- NFT trades promotion      │ │
│    │     platform                  │   └──────────────────────────────┘ │
│    │                               │                                     │
│    │  3- gathering community,      │   ┌──────────────────────────────┐ │
│    │     collaboration with other  │   │       Game App Launch         │ │
│    │     projects                  │   ├──────────────────────────────┤ │
│    └──────────────────────────────┘   │  Youtube video promotions     │ │
│                                        │                               │ │
│                                        │  Facebook ad campaigns        │ │
│                                        │                               │ │
│                                        │  P2E tournaments promotion    │ │
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Marketing Scope:

The game audience initially begin with the selected Blockchain users, P2E gamers and in later phases targets the PvP car gamers in general.

Social Interaction:

The team should hire a streamer, and a face that represents the game by uploading continuous updates on YouTube, twitter and engages in hosting AMAs in discord and engaging with the community with video records of gameplay and an analysis studio of other players' gameplay.

Gameplay Research

How is the game interesting?

In summary, Rise of robos brings in the experience of gaming and emerge with NFTs. And in game play the game provides players the following experience:

1. Skills that make player actively engage with the game:
2. Variety of model choices, moving curiosity into exploring what fits the player more:

3- An engaging community where players get to know each other
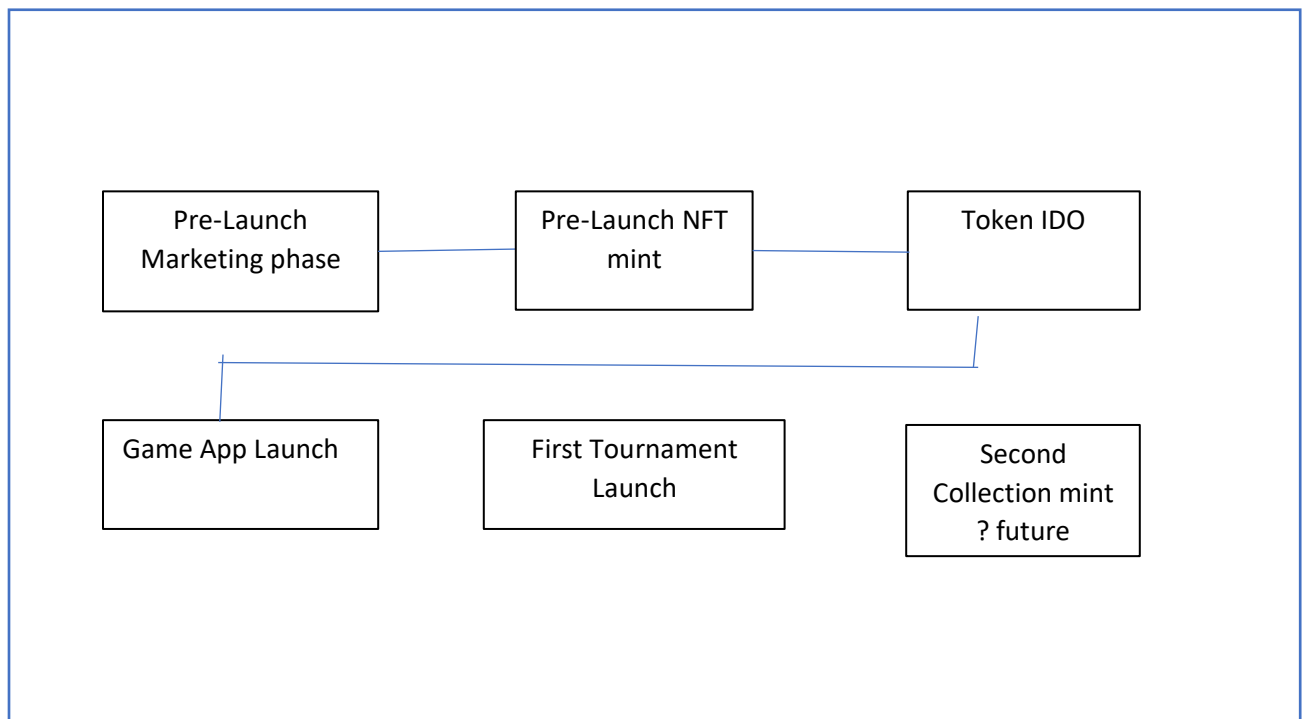
Similarity to other types of games

The game, in the aspect in design is very similar to other PvP games in Web 2.0. And there are games that are very similar in design such as **"Galaxy Fight Club"** in Polygon, a 3D hyper casual game that takes the experience of brawl stars and brings it to Polygon.

The game, in design is also inspired from web2.0 car battle PvP games such as **Steel plate, metal madness and crush of cars.**

Launch phases & Development Plan

To make an attractive game and a highly engaging community, the launch plan is divided into the following phases:

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┌──────────────┐     ┌──────────────┐     ┌──────────────┐
│ Pre-Launch   │─────│ Pre-Launch NFT│────│  Token IDO   │
│ Marketing    │     │    mint       │    │              │
│ phase        │     │              │     │              │
└──────────────┘     └──────────────┘     └──────────────┘

┌──────────────┐     ┌──────────────┐     ┌──────────────┐
│ Game App     │     │ First        │     │  Second      │
│ Launch       │     │ Tournament   │     │  Collection  │
│              │     │ Launch       │     │  mint        │
│              │     │              │     │  ? future    │
└──────────────┘     └──────────────┘     └──────────────┘
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Pre-Launch Marketing phase:

In the earliest stage of the development plan building a social media base, discord and a webpage and then marketing and telling the targeted audience about the upcoming project.

Pre-Launch NFT Mint:

Pre-Launch NFT mint is like a fund raiser, gathered community members and early joiners will participate in the mint and mint their Robos before the game app launch. The NFT mint phase should happen after a month of getting a good amount of audience, any delay is discouraged as it would frustrate the community and harm the future of the project.

1 month after Token IDO:

Token IDO is 2 weeks after the launch of the NFT, before and after the IDO the team must continuously keep the community updated on the game app development news.

Game App released:

1 month after IDO, launching the game's most wanted feature and what the team, community and everyone is waiting for.

First Tournament Launch:

Launch of the first official tournament should be on s pre-scheduled announced date and not more than one month after the Game App release.

Second collection mint?

Minting a second collection and a new track for the project.

Development Steps

To develop the game, we need to go through three main processes:

1- Unity Core dev
2- Frontend web3 API dev
3- Smart contracts dev
4- 3D designer
5- Sound engineer

Core Game dev, Game Engine:

Unity game engine development will include:

1. The development of the game maps, interface, menu and setting
2. Player movement development
3. Skill attribute addition, explosion animation, magnetic field animation
4. Sound engineering sounds, e.g., magnetic field sound, and other skills initiation sound.
5. Connecting to the blockchain mechanics, sending data to API mechanics.
6. Smart contract Development, creating an oracle that receives data from the API
7. Security measures for the game, stop token mint, replace contract feature "in case of attacks", other related security features.

Developing the Game Logic, connecting to blockchain and attribute difference:

Game logic should have 2 main factors

1. Connecting to wallet
2. Checking if the player has a robo or not
3. Giving choices if player doesn't own a robo or if the player wants to play with another model design if he owns one.
4. Loads Robo attributes and skills for NFT holder, if upgraded and new skills the game app should act according to the new skills.

3D designs:

Designing Assets for four model designs:

Each model design has special tools and some unique design that other players can clearly distinct the designs from each other

Smart Contract development

ERC 721 upgradable NFT collection:

An ERC 721 upgradable NFT design that has metadata, using the ERC721 combined with minimum game logic in the contracts to keep the code secure.

ERC 20 token, staking contracts:

Making a staking mechanism in the game, and IDO launch in cooperation with a secure IDO platform in the chosen blockchain.

Estimated Personnel cost

1- **Unity main game logic dev approximately 50K$**
2- **Skills, and attributes logic 30K$**
3- **Front end web3 API connection 10K$**
4- **Smart contracts estimated cost 10K$**
5- **Audit estimated cost 15K$ "contracts are simple ERC721 at the early stage"**
6- **Marketing, and community management 15K$**

Estimated Total cost 130K USD