

Cody Gaudet

Rilla Khaled

CART353

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### 50 Project Ideas

1. Cat detector: use webcam to detect cats and zooms in on them
2. Wrap simulator - give the program an object, and the program will generate 3D line art of the thing.
3. Interactive experience in a room where slightly touching ANYTHING sends it flying. Exaggerated forces, everywhere. Possible goal: clean the room.
4. Simulation for daily life, except the tasks are extremely hard to do, the interface is overly bright/loud/annoying, and transitions are extremely jarring. When the player gets frustrated and button mashes/clicks things repeatedly, it translates to the in game avatar having a fit of rage and destroying everything, this ending the game rather badly
5. Snow clearing puzzle: must clear a path in an enclosed area. Each tile can have up to 3 shovel-fuls of snow. The avatar can only walk through 0-1 shovelful on the ground.
6. An action game where your inventory is limited to one weapon. Other weapons can be dropped and retrieved later. Different weapons can unlock certain paths or defeat certain enemies, so the player must a) remember where they leave their stuff and b) figure out a way through the game that isn't necessarily going back and forth forever. See, enemies are very common and it would be unwise to NOT have a weapon. So you can't just drop

your sword somewhere and go back to get your bazooka, in case you get swarmed and killed by monsters.

7. An interactive piece which consists of a world. You can hide messages in the world (under rocks, in trees, etc) and look for other players' messages. The goal should not be to be found. Players gain things (points, more paper for messages, different colors to write messages in) by either finding things or by having their message undiscovered for a couple hours/days/etc.
8. A puzzle game where all the pieces are shaped like letters, in a way that they can fit into one another. (+ ., ? and !)
9. Movie editing sim to develop Ctrl-S reflexes in animators and media developers. It consists of a puzzle where you put things together in an Adobe Premiere like environment, but the app shuts down every 30-60 seconds.
10. Snake, but in 3D. (And in an aquarium, and it's called Eel)
11. Shooter game in which every explosion results in shrapnel (particle system) that can harm the player.
12. Program to detect a thing from visual input, then have particles/balls collide with it. For example, the program wants to find the reddest item in the camera view, then finds all pixels that form that object, then creates a shape the length and size of the object for things to bounce against.
13. Snake QWOP: guide a snake made of segments through a path. Each segment of the snake is controlled with keys. There are 26 snake segments and each is assigned to a different key. Pressing the key causes the snake segment to turn left or right.

14. Phone game where the player can plant a garden. To acquire seeds, they must take a picture of the plant and upload it. (the app could also detect if the picture is in the camera roll or download folder, so players must find the plant in real life)
15. Text processing app that replaces every word with a synonym of that word and outputs the result. The process can be repeated several times. The result is meant to be hilarious. (think of these apps where you paste a text and it translates it in several different languages before outputting the result)
16. Night sky simulator that allows users to connect stars to create their own constellations. Players can also view already existing constellations to compare.
17. A multiplayer roguelike game where the players' attack types are based on temperature at their location. (35 degrees is fire, obviously. 15-20 is light, 10-0 is earth, 0 to -10 is water, -10 to -20 is metal, -20 and on is ice... this can change drastically throughout the week, or even during play!)
18. An interactive thing where screen brightness affects in game time - brightest is day, darkest is night.
19. A game that simulates the Spoon theory - the player can only perform a set amount of tasks, each of which require 1 spoon. The player must choose which tasks to do, as they don't have enough spoons to do them all.
20. A game set in a Canadian post apocalyptic setting where the player is trapped with mutants in an underground system. Since it's in Canada and there are no guns, the player must improvise weapons with whatever they come across to protect themselves. (similar to Minecraft or don't starve, the player can assemble things like a plastic frappuccino cup, glass shards from a broken display, a coat hanger, etc. to create weapons, with varying success)

21. A game where the user needs to enter graph equations ( $f(x) = (x^2+4)/2$ ) to create slides/platforms on which a ball dropped from the top of the screen travels to reach its destination.
22. Airflow - a puzzle game involving custom built PC's and fans. The player must put the fans in the best places for airflow in different PC's (with different cases, etc).
23. An app/website that recommends foods/snacks based on texture rather than taste. It collects user input by asking users about what snacks they like, then suggest similar snacks. (example: user says they like almond roca. Other users who like roca also liked/compared the texture/crunch to almonds, or even scottish mints. The program thus recommends these snacks)
24. A game similar to PacMan, but he gets bigger and slower every time he eats a dot;
25. Toy designed to familiarize people to fencing moves and techniques by moving a 3d model of a fencer around.
26. A game where the player is in a wheelchair, and needs to complete some tasks despite heavy snowfalls blocking some paths, etc. It's meant to sensibelize people to issues disabled people may face during winter.
27. An interactive piece that places rainbow dots on a canvas. The X and Y values of the dots are determined by the pitch and volume of audio input.
28. A sandbox type of toy where the player can create particle systems by clicking on the screen. These particles will move in a spiral. The color of the system particles will be taken from a webcam image/video.
29. A puzzle game where the player needs to stack/arrange people so they all fit under a blanket.
30. An endless scroller where everything gradually slows down exponentially.

31. Stealth based game where you are an elephant sneaking out of a zoo.
32. Word scramble game with the option of submitting a completely gibberish answer if you can provide a definition. It is then added to the list of accepted words
33. 8 am class simulation: the user needs to keep students awake by clicking on them. The game ends when they all fall asleep or the class ends.
34. A Kinect game that teaches children sign language with minigames.
35. Tone match/endless scroller game where players must sing tunes properly to create platforms on which a character can run.
36. Viral infection game where you play as a virus infecting healthy particles by touching them.
37. Race game where the car's speed to controllability/turn difficulty ratio depends on the player's altitude.
38. Name memory game where you need to associate characters with their names
39. Interactive process that guides the players through the steps needed to make a telescope.
40. Survival game based in space, on an abandoned base.
41. Image processor that detects and translates sign language, and also detects and transcribe voice
42. City building/planning game with emphasis on accessibility.
43. A program that generates endless animated fractals and where the color of the fractal is affected by the mouse position.
44. A program that randomly animates a stickman by generating the joint X and Y coordinates with perlin noise.

45. A toy with a character that shrinks away when the audio input is loud, and slowly comes out as it quiets down. (i would imagine using this to quiet down a group of children?)
46. A program that generates a couple lines that act like water. The user can drop various objects in and watch the lines' reaction.
47. Conversation simulator where the character you play has Auditory Processing Disorder, and the communication (or lack thereof) is represented visually.
48. A circuit exploring game where the player can put together electrical circuits and activate them.
49. A game where you need to herd a flock of objects into a particular path.
50. A game that constantly switches between a cooperative mode and a competitive mode.  
  
At times, characters will get points for killing other characters. Other times, they will all get points when one of them accomplishes something, and lose some if they kill someone.