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DevLUp FSU GBM #7

October 24th, 2024

Welcome!

Next Few Weeks

Date	Week #	GBM Title	Secondary Event	Presenter
29 Aug	1	(No Meeting)	Involvement Fair	
5 Sep	2	Intro to Club and New Club Project		Club
12 Sep	3	Intro to Game Design		Chris
19 Sep	4	Intro to 3D Game Dev in Godot		Dion
26 Sep	5	(No Meeting)	Hurricane	
3 Oct	6	Intro to 3D Modelling in Blender		Jake, Parker, Emma
10 Oct	6	Blender Animations		Ares
17 Oct	7	Blender Materials		Parker, Jake
24 Oct	9	Pixel Art		Ares, Emma
31 Oct	10	Tile Maps	Game Jam!	Jake, Ares
7 Nov	11	Writing for Games		Emma, Chris
14 Nov	12	UI Design		Emma, Jake
21 Nov	13	3D Math		Dion
28 Nov	14	Thanksgiving Break		
5 Dec	15	Goodbye Chris Social		Chris
12 Dec	16	Finals		

DevLUp War Game Jam - November 1st - 3rd

COUNTDOWN TO GAME JAM: 7 DAYS

#👀showoff **recap**

What is “pixel art,” exactly?

Pixel art is a form of art characterized by having a low spec aesthetic, where pixels are placed deliberately.

Although all digital art is made from pixels, not all digital art is pixel art. Even if you can see the pixels, it may not be *pixel art* - low resolution art is not necessarily pixel art. This is because pixel art requires *intent* in pixel placement.

Pixel Art vs Digital Art

This is pixel art.

This is just art
made of pixels.

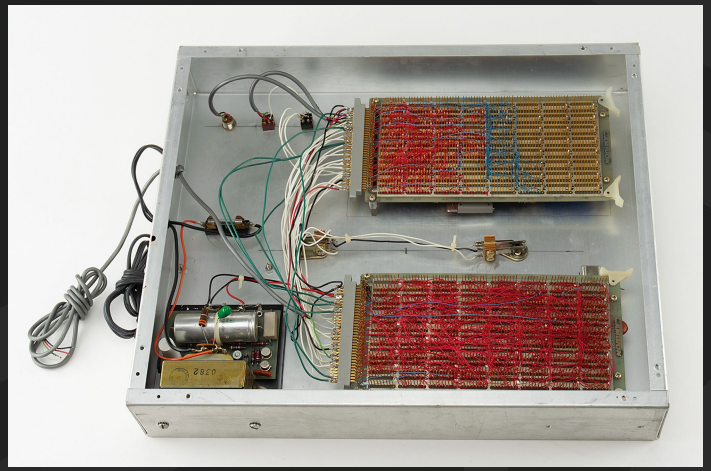
Rewind: Why is pixel art a thing?

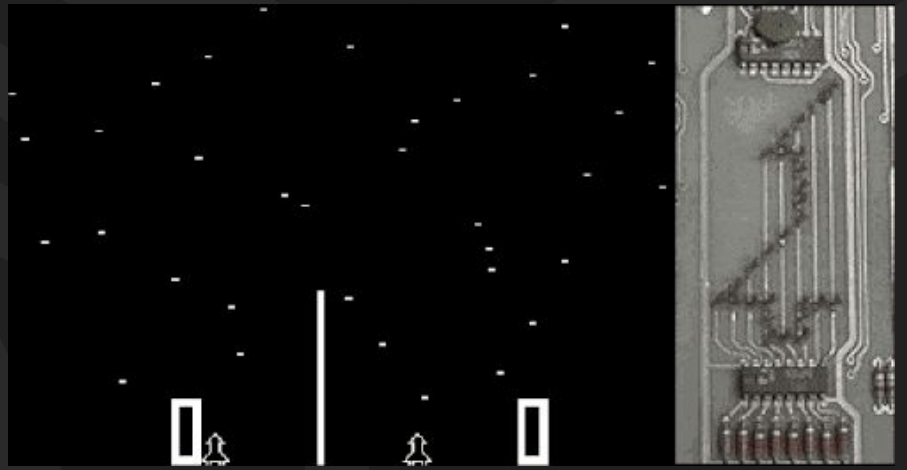
If we can create high resolution designs and render these with relative ease, what's the point of learning how to make these simple, lower quality designs?

To answer this, let's quickly dive into some video game history and design fundamentals - it won't be long, I promise.

Early Video Games: Pre-ROM (1973)

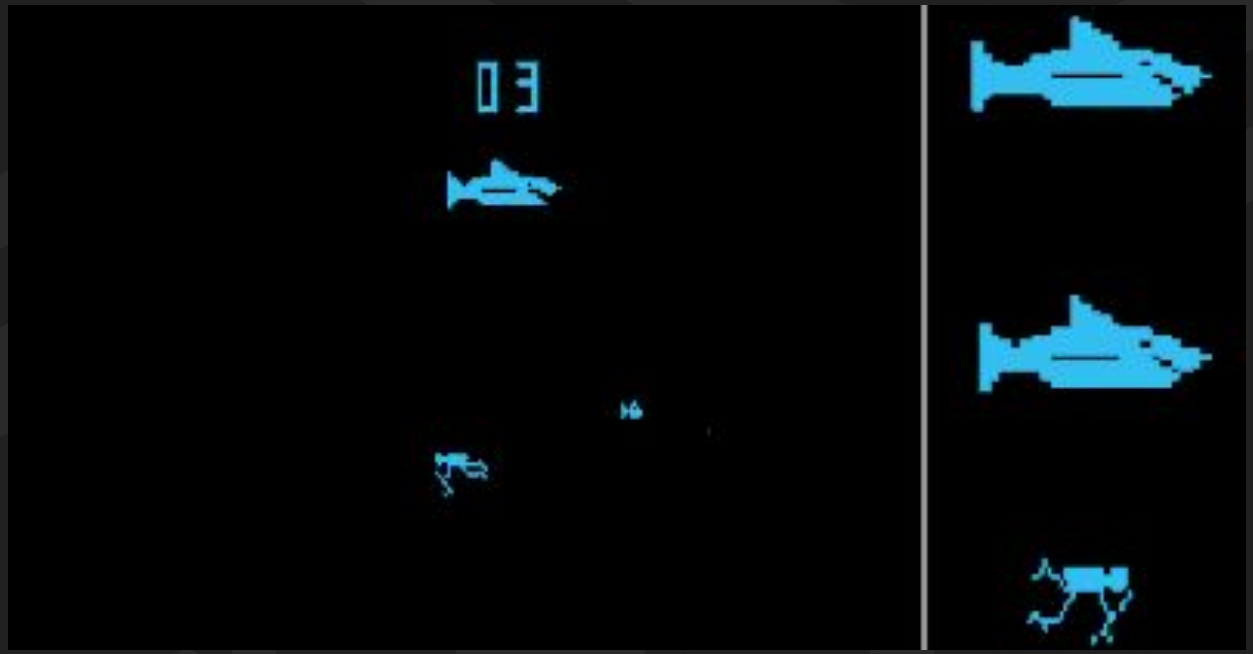
Atari: Space Race





Early Video Games: with ROM! (1975)

Atari: Shark Jaws



Early Video Games: CPU-driven! (1977)

Exidy: Circus

Fundamentals of Pixel Design

- Reasonable resolutions
- Simplifying key shapes
- Limited but comprehensible color palettes
- Graphical projection
- Texturing without noise

How do you pick a resolution?

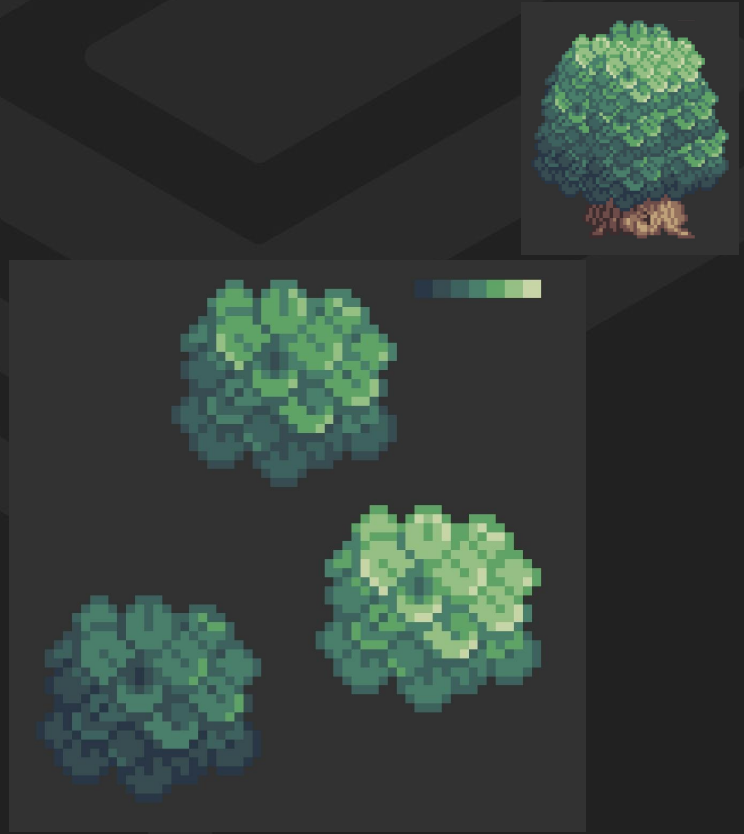
Resolution is the amount of detail of a given image. For pixel art, it's usually measured by the number of pixels along the edges of a grid.

Pixel art resolution is usually scaled along the squares of 2: 2, 4, 8, 16, 32, 64, 128, 256… Higher resolutions allow for greater detail, coupled with a loss of simplicity and potentially even over complication.

Simplifying Details

Taking complicated designs and transforming them into simple clusters is one of the most complex but most important aspects of creating pixel art.

All the leaves of this tree are made up of the same repeated cluster of leaves. This single cluster receives light and shadow adjustments before being placed around appropriately for the intended shape.



Color Palettes - Fun Math!

Color palettes can be created by eyeballing colors or color picking directly from an image with a tool.

Alternatively, you can generate color palettes using math, by shifting the hue, saturation, and lightness of one color up and down to create lighter and darker variations of it. Adding the same number to all of these hues would change the overall color from red to, for example, green.

H	320	335	350	5	20	35	40
S	95	90	80	70	60	40	20
L	15	30	45	60	70	80	85
Swatch							
H Shift	-15	-15	-15	0	+15	+15	+15
S Shift	+5	+10	+10	0	-10	-20	-20
L Shift	-15	-15	-15	0	+10	+10	+5

Workshop!

MAKE SOMETHING AWESOME

And show it to me!!

Exit Survey:

Fig. 1: *Homer dislikes exit surveys.*