

Introduction Video

University of Aalto

Herschel Pravin Pawar
December 21, 2024

Outline

= Self Introduction	3
= Who am I?	4
= Coventry University	5
= Result	6
= Themes	7
= Main Mechanic	8
= The Team	9
= Player Architecture	10
= Game Maker ToolKit's 2023 Game Jam	11
= Result	12
= Themes	13
= Gameplay	14
= Main Mechanic	15
= Bevy	16

Outline

= Other Projects	17
== VRCX Insights	18
== Booth Archiver	20
== Krita/GIMP Palette Generator	21
== Kait	22
= Current Interests	23
= Why Aalto	25
= Acknowledgement	26
== Heavily Inspired by	28

= Self Introduction

= Who am I?



Herschel Pravin Pawar
sakurakat.systems



GitHub:pawarherschel/UniOfAalto

= Coventry University

= Result

Criteria	Rank	Score*	Raw Score
Gameplay	2	3.286	3.600
Presentation	2	3.469	3.800
Creativity	3	2.739	3.000
Enjoyment	3	2.921	3.200

Table 1: Coventry University Game Jam Results

= Themes

Continuous Change

2D Platformer

= Main Mechanic

Timer (seconds): 1.3 of 3.0
Sprite Index: 1 of 2
Player Speed: (0.00, 0.00)
(max horizontal speed: 1.5)



Figure 1: Hero Switching Mechanic

= The Team



Figure 2: Us

= Player Architecture

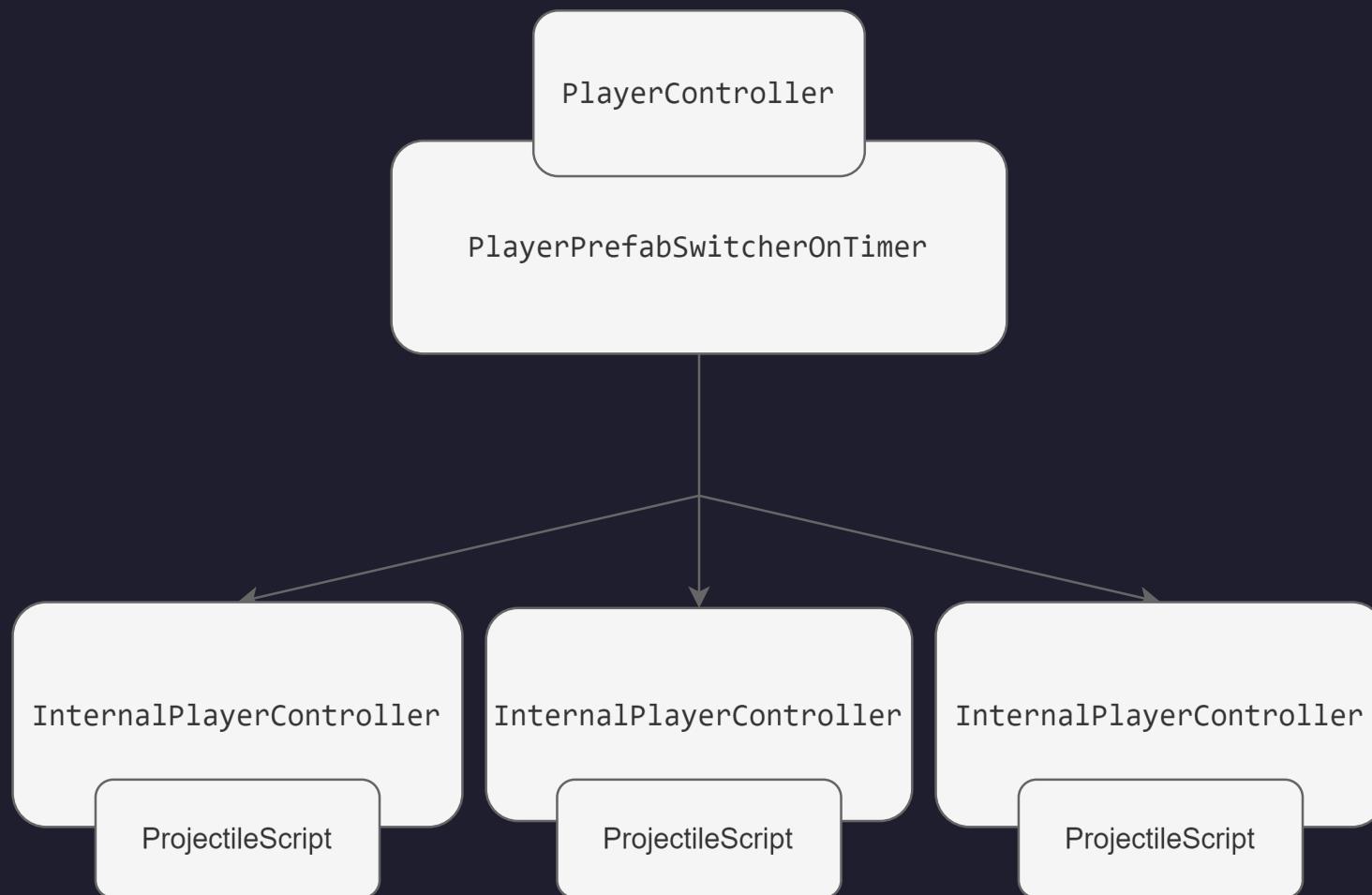


Figure 3: Player Architecture

= Game Maker ToolKit's 2023 Game Jam

= Result

Criteria	Rank	Score*	Raw Score
Enjoyment	4296	2.237	2.583
Overall	4652	2.285	2.639
Presentation	4720	2.237	2.583
Creativity	4780	2.382	2.750

Table 2: GMTK's 2023 Game Jam Results

= Themes

Roles Reversed

= Gameplay



Figure 4: Screenshot

= Main Mechanic



Figure 5: All Invaders Shooting

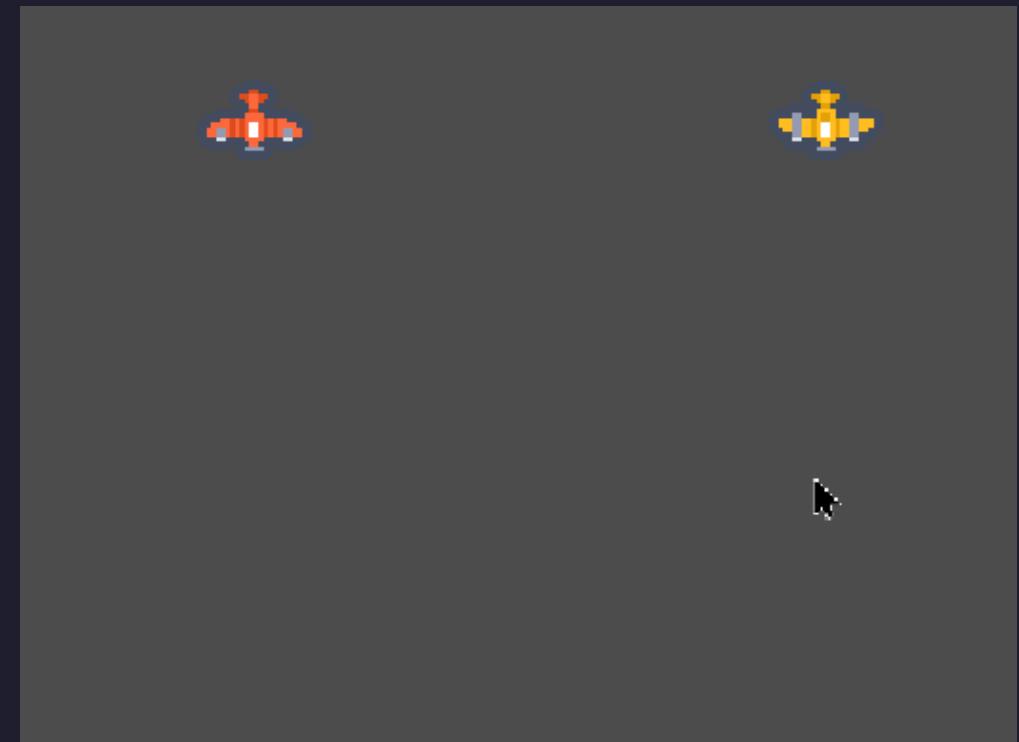


Figure 6: Two Invaders Shooting

= Bevy

= Other Projects

= VRCX Insights

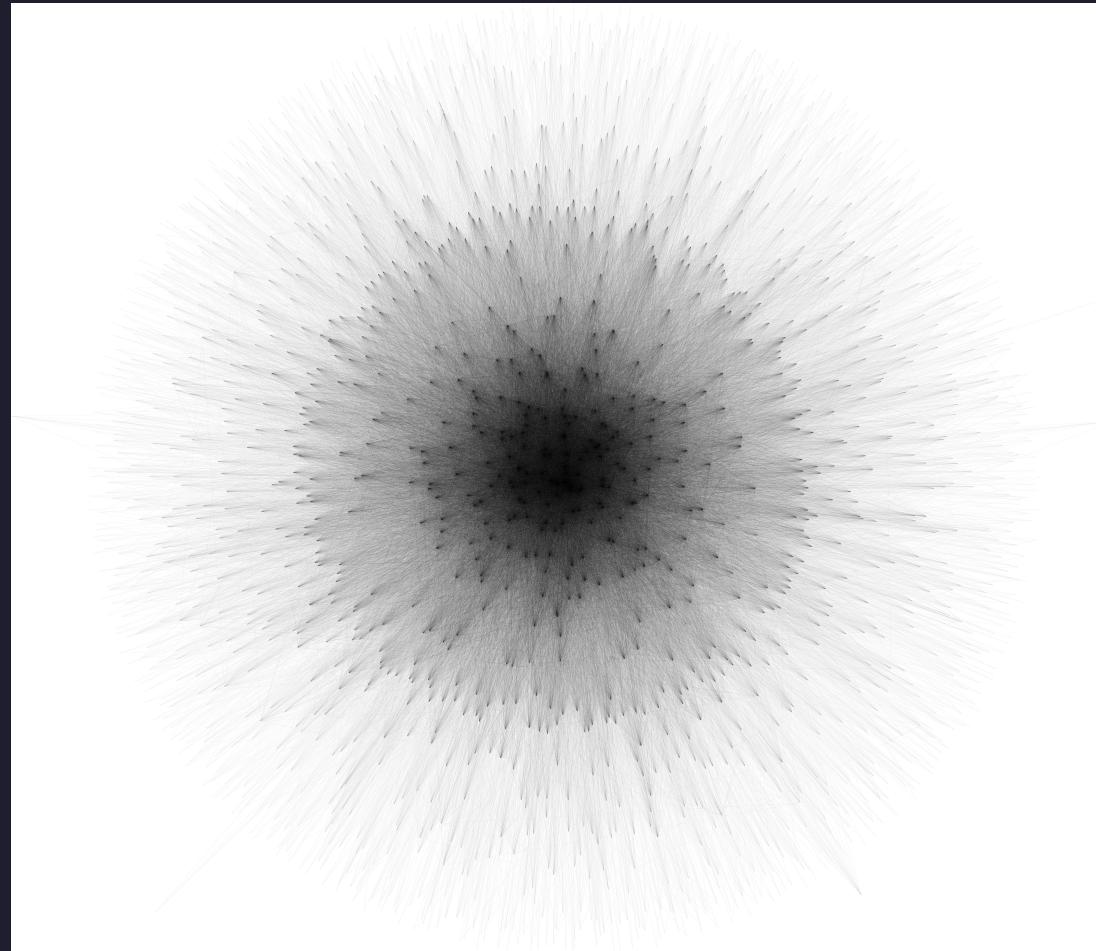


Figure 7: A *VERY* zoomed out view of the graph produced

= VRCX Insights

number of labels in the DOT file:

1835 labels

total lines in the DOT file:

102,560 lines

size of svg:

33.7 MB (35,402,018 bytes)

png output code:

```
#page(height: (7680pt * 5), width: (7680pt * 5))[
    #image("dot_edge_no_label.dot.neato.with_sand.svg")
]
```

size of png produced:

3.34 GB (3,597,062,134 bytes)

= Booth Archiver

The screenshot shows a Microsoft Excel spreadsheet titled "booth_data". The table has columns labeled A through P, with headers including "Item Name", "Tags", "Price", "Current", "Hearts", "Images", "Downloads", and "Markdown". The data consists of 43 rows of items, each with a unique ID, name, tags, price, current value, number of hearts, number of images, download count, and a generated Markdown link. The data includes various items such as backgrounds, windows, VRoid models, and various types of VRoid assets like clothing and accessories.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Item No.	Item Name	Author	Author	Primary	Second	Tags	Price	Current	Hearts	Images	Downloads	Download	Markdown		
1	Background https://arg.ArgamaWi/ArgamaWi	https://arg	Source	Me	Graphics	virtual youtuber, streaming bac	0 JPY	1527	3	https://bo	52	https://bo	Here are Backgrounds you can u		
2	Windows https://arg.ArgamaWi/ArgamaWi	https://arg	Source	Me	Graphics	virtual youtuber, streaming bac	0 JPY	1469	3	https://bo	40	https://bo	Here are Windows you can use f		
3	Misc VRoid https://ononlyvirtua onlyvirtua	https://on	Source	Me	Materials	mmrd, iris, virtual youtuber, VRC	0 JPY	1104	3	https://bo	17	https://bo	This includes 9 free pngs of eye i		
4	【人生行】https://hir.ぬんぬん/ぬんぬん	https://hir	Source	Me	Materials	(Other)	0 JPY	446	5	https://bo	12	https://bo	CoC】ナリオ「人生行路、あん		
5	【SAI用】https://chi.くろま堂/くろま堂	https://chi	Source	Me	Materials	テクスチャ, フリー素材, 加工	0 JPY	831	11	https://bo	11	https://bo	[2020年11月15日更新]和柄セ		
6	【ココフォ】https://kor.お豆腐と;お豆腐と;	https://kor	Source	Me	Materials	素材集, ココフォリア, ココ	0 JPY	1762	8	https://bo	10	https://bo	ココフォリアで使える素材集		
7	(FREE) Un https://ins.insertshop.insertshop https://ins	3D Model: VRoid	cute, underwear, VRoid, essent	0 JPY	42	5	https://bo	10	https://bo	I was looking for underwear to r					
8	Free Catgi https://bo BoboHuhu, BoboHuhu, https://bo	3D Model: VRoid	3D, free, cat, モデル, 衣装, ani	0 JPY	1664	4	https://bo	9	https://bo	Includes: 42 Variations- Earless					
9	Free Catgi https://bo BoboHuhu, BoboHuhu, https://bo	3D Model: VRoid	3D, free, cat, モデル, 衣装, ani	0 JPY	1664	4	https://bo	9	https://bo	Includes: 42 Variations- Earless					
10	[VRoid Free] https://as.assetcircu assetcircu https://as	3D Model: VRoid	virtual youtuber, vroid male, vrc	0 JPY	647	2	https://bo	9	https://bo	[Void Free Eyeline Pack] Contai					
11	【ココフォ】https://se.何も売っ 何も売っ	https://se	Source	Me	Materials	ココフォリア, ココフォリア,	0 JPY	873	4	https://bo	8	https://bo	自作した素材達のまとめです		
12	【apng系】https://hu hurasuk07 hurasuk07	https://hu	Source	Me	Materials	素材, ココフォリア, apng, コ	0 JPY	9423	3	https://bo	8	https://bo	ココフォリア等で使用可能な		
13	【APNG】https://un undoclub undoclub https://un	Source	Me	Icons	TRPG素材, 新	0 JPY	3779	1	https://bo	8	https://bo	内容・動く円形の波紋(7色			
14	フリー素材 https://chi.くろま堂/くろま堂	https://chi	Source	Me	Materials	テクスチャ, フリー素材, 加工	0 JPY	1661	1	https://bo	8	https://bo	[2023年1月29日更新]pixivで公		
15	【フリー】https://mi mirumirur mirumirur https://mi	Source	Me	Materials	フリー素材, 配信者, 配信, vir	0 JPY	1212	1	https://bo	8	https://bo	SETLISTのフリー素材1.5種!			
16	Coc神話生 https://to toとけたさ;とけたさ	https://to	Source	Me	Materials	クタルフ神話trpg	0 JPY	976	8	https://bo	7	https://bo	▼神話生物の絵です。ちょっと		
17	COCセッ https://ko 木莉屋	木莉屋	https://ko	Source	Me	Materials	TRPG素材, セッション用素材	0 JPY	990	5	https://bo	6	https://bo	COCTRPGでのセッション (コ	
18	SAN値が https://ya はてなし:はてなし	https://ya	Source	Me	Materials	TRPG素材, アニメーション素	0 JPY	1851	1	https://bo	6	https://bo	1年前に自分用に作ったAPNG		
19	フレーム https://ya やまシ おやまシ	https://ya	Source	Me	Materials	フレーム素材, ココフォリア	0 JPY	847	1	https://bo	6	https://bo	ココフォリアで使用できる		
20	【どんどん】https://ya やせいの やせいの	https://ya	Source	Me	Materials	TRPG素材, 抽象的, 抽象背景	0 JPY	1532	9	https://bo	5	https://bo	2021/11/1 公開条件付き商		
21	【無料】pmx https://u-U.Stella In U-Stella In https://u-U	3D Model: VRoid	kawaii, 3DCG, 3Dデータ, 素材	0 JPY	304	6	https://bo	5	https://bo	お気に召しましたらアースト					
22	Avatar Ma https://ter ぱらばん らぱん	https://ter	Source	Me	Materials	化粧, VRChat, キッシュちゃん	0 JPY	638	5	https://bo	5	https://bo	Avatar Makeup Toolkitはあらゆ		
23	Cat Love C https://po peachspaq peachspaq https://po	3D Model: VRoid	3D, 3DCG, free, 3D Character, 3	0 JPY	15	2	https://bo	5	https://bo	How to use:1: Go to shirts2: Clc					
24	VRChat向 https://po ヒグマの ヒグマの	https://po	3D Model: 3D Model: VRChat	virtual youtuber, VROIDSTUDIO	0 JPY	1870	1	https://bo	5	https://bo	VRChat向けのAnimator Control				
25	【VRoid Free】https://as.assetcircu assetcircu https://as	3D Model: VRoid	virtual youtuber, VROIDSTUDIO	0 JPY	943	1	https://bo	5	https://bo	*-*-*-*-*-*-*-*-*-*-*-*-*-*-*					
26	いつの日 https://ha はてなし:はてなし	https://ha	Source	Me	Background	GIF, TRPG素材, アニメーション	0 JPY	686	1	https://bo	5	https://bo	1年前に自分用に作ったAPNG		
27	オリジナ https://av.Boo Boo B Boo B https://av	3D Model: 3D Charac	吸血鬼, 巨乳, 爆乳, 銀髪, 腕	7700 JPY	616	19	https://bo	4	https://bo	# 吸血鬼のムルシエラちゃん					
28	【VRoid S】https://luk LUK4 LUK4	https://luk	3D Model: VRoid	3D, 3DCG, free, 3D Character, 3	0 JPY	336	7	https://bo	4	https://bo	Please follow + like if you'll like t				
29	宝石テク https://yo ヨコユケ ヨコユケ	https://yo	Source	Me	Background	宝石, キラキラ, フリー素材,	0 JPY	2021	6	https://bo	4	https://bo	pixiv公開中の「宝石テク」		
30	コママイ https://de demiesop demiesop https://de	Source	Me	Icons	フリー素材, アイテム, アイニ	0 JPY	946	5	https://bo	4	https://bo	個人製作で作った。99 x 100 p			
31	【フリー】https://mi mirumirur mirumirur https://mi	Source	Me	Materials	素材, キラキラ, ASMR, 動画素	0 JPY	5495	4	https://bo	4	https://bo	背景透過のキラキラガーラン			
32	【VRoid】https://fra Francake Francake https://fra	3D Model: VRoid	animal, free, cat, socks, VRoid	0 JPY	1534	3	https://bo	4	https://bo	Cat / Animal paw shoe and sock					
33	TRPGオン https://ko 木莉屋	木莉屋	https://ko	Source	Me	Materials	TRPG素材	0 JPY	648	3	https://bo	4	https://bo	COCセッションの盤面素材!	
34	【無料】https://sin シンプル シンプル	https://sin	Source	Me	Materials	TRPG, 素材, TRPG素材, ココ	0 JPY	572	3	https://bo	4	https://bo	ココフォリア用に使えるシン		
35	【無料】https://sin シンプル シンプル	https://sin	Source	Me	Materials	TRPG, 素材, TRPG素材, ココ	0 JPY	438	3	https://bo	4	https://bo	ココフォリア用に使えるシン		
36	とてもか https://pic ピック ピック	https://pic	3D Model: 3D Charac	テクスチャ, タイツ, 3D素材	0 JPY	112	1	https://bo	4	https://bo	網タイツのテクスチャです。				
37	【無料】https://iri shoshoiri shoshoiri https://iri	Games	Game-Rela Unity, VRChat, VRoid, UnityEdit	500 JPY	96	1	https://bo	4	https://bo	Unityのエディタ拡張です。次					
38	Pride Char https://fis The-Fish-T The-Fish-T https://fis	3D Model: 3D Charac	3D, asexual, Gay, Non-binary, b	0 JPY	88	11	https://bo	3	https://bo	Polyomi Shaders are used in the					
39	【無料】3D https://bu ぶち ぶち ぶち ぶち	https://bu	3D Model: 3D Charac	3D, Accessories, 天使, 無料君	0 JPY	1517	10	https://bo	3	https://bo	VRChat向け3Dモデル「ドロド				
40	【オリジ】https://skyk skyk skyk skyk	https://skyk	3D Model: 3D Charac	3D, Accessories, 天使, 無料君	5000 JPY	351	9	https://bo	3	https://bo	オリジナルアバターー【さな-s				
41	【ふわふ 8t8】https://8t8 8t8	https://8t8	Source	Me	Materials	素材, Coc, TRPG素材, ココ:	0 JPY	2206	6	https://bo	3	https://bo	ココフォリアなどで使えるCo		
42	PONCHO https://an ANGEL IN ANGEL IN	https://an	3D Model: 3D Charac	Cat, VRChat, Avatar, Avatar3.0, 和服, 和服, けもみみ, 3D Char	0 JPY	558	5	https://bo	3	https://bo	These mischievous felines get th				
43	【無料】https://tai 猫の箱 猫の箱 猫の箱 猫の箱	https://tai	3D Model: 3D Charac	和服, 和服, けもみみ, 3D Char	100 JPY	315	5	https://bo	3	https://bo	オリジナル3Dモデル猫明(han)				

Figure 8: One of the spreadsheets generated by the program

= Krita/GIMP Palette Generator



Figure 9: Original Image



Figure 10: Quantized Image



Figure 11: Color palette generated with quantization level 5

= Kait

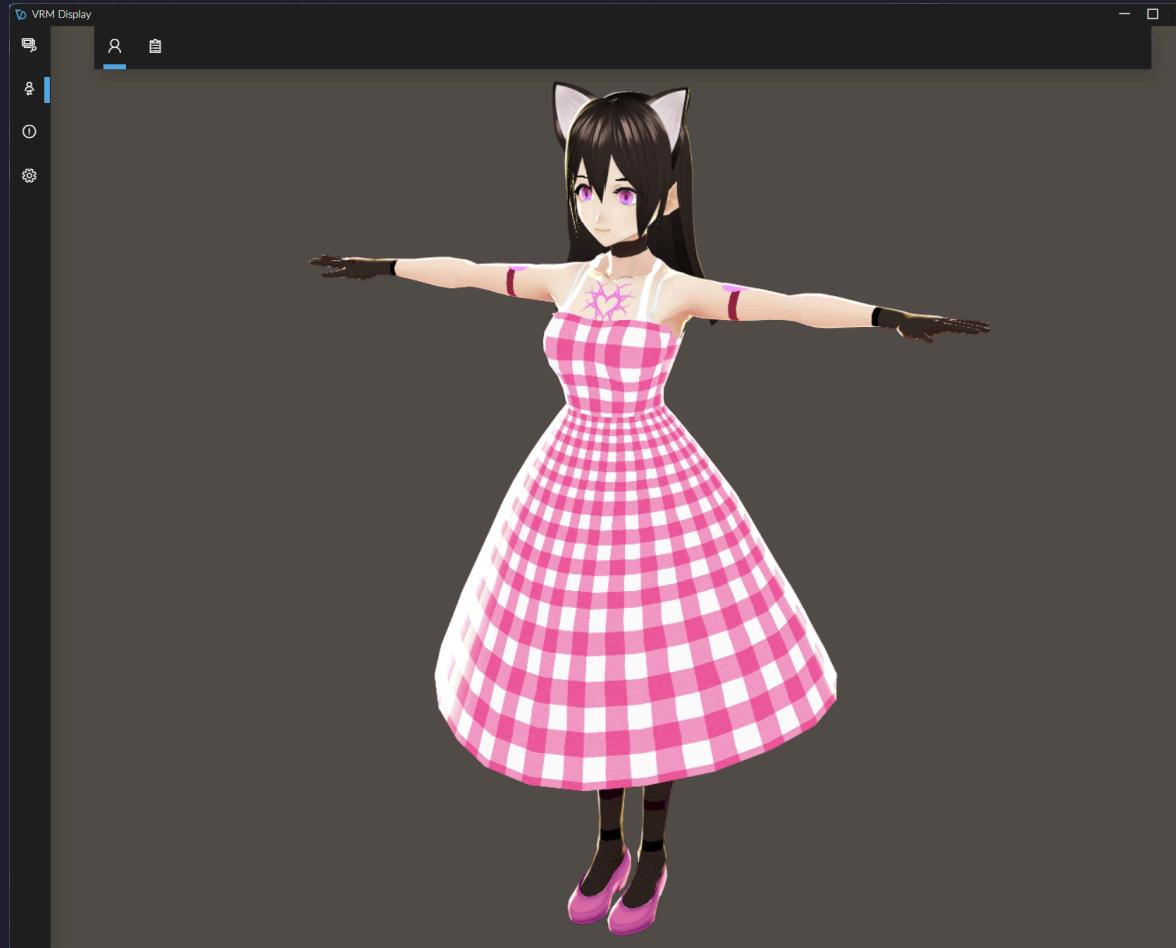


Figure 12: OC Kait - Made with the help of VRoid Studio

= Current Interests

= Current Interests

- **WGPU** – an implementation of WebGPU spec in rust – to offload work to the gpu
- **Cranelift** – an alternative to LLVM – creating custom scripting languages for game engines
- **Stateless Abstractions** – Inspired by NixOS, functional programming, WGPU – Creating good abstractions which reduce cognitive load
- **Technical art** – bridging programming, art, and mathematics – I am fascinated by gpus and shaders
- **GPGPU** – Hardware Acceleration – Offloading tasks and doing them in parallel
- **Giving technical talks** – Inspiring Others – Kate Compton inspired me, and I want to inspire others, just like her

= Why Aalto

= Acknowledgement

= Acknowledgement

- fivepb for helping me push through when I wasn't able to
- mlembug for going through the script
- Shashank and Divyesh for checking the presentation
- Henna for helping me practice and pushing me towards getting higher education
- and many many many other people

= Heavily Inspired by

- Acerola for the general vibes of the presentation
- No Boilerplate for the introduction

Made with ❤️ using

- typst Typst
- 投Touying Touying
-  Catppuccin Theme
- JetBrains Mono and NotoSerif