

Introduction Video

University of Aalto

Context:

- Text underlined with dashes are links
- Acknowledgements at the end of the presentation
- Text using Noto Serif are supposed to be “creative” elements
- List of tables, images, and links are in the Appendix at the end
 - Download the presentation from Link to slides: GitHub:pawarherschel/UniOfAalto:condensed-slides.pdf to view them

Herschel Pravin Pawar

December 22, 2024

= Outline

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

= Outline

= Other Projects	17
== VRCX Insights	18
== Output Metadata	19
== Booth Archiver	20
== Krita/GIMP Palette Generator	21
== Kait	22
= Goals for 2024	23
== Goal – Short Description – Why?	24
= Why Aalto	25
== Heavily Inspired by	27
= Appendix	28
== List of Images	29
== List of Tables	31
== Table of Links	32

= Self Introduction

= Who am I?



Figure 1: Image of me
original file @ me.png



Herschel Pravin Pawar
sakurakat.systems



[GitHub:pawarherschel/
UniOfAalto](https://github.com/pawarherschel/UniOfAalto)

= Coventry University
Summer School Game Jam

Fractured Elements

= 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

Judge Feedback:

Visually nice platformer game with a pixel art approach and switching characters that allow either melee or ranged attacks. Multiple levels make it interesting and force the player to master their jumping and attacking skills. There is a final boss for the finale. One improvement I would suggest is that I was unsure what caused me to change between the characters - I was not sure if it was timed, depending on where I was in the level or a button press. Well done to all involved in the game and the hard work you put into it!

Continuous Change

2D Platformer

= The Team



Figure 2: Us
original file @ shashank and me.jpg

= Main Mechanic

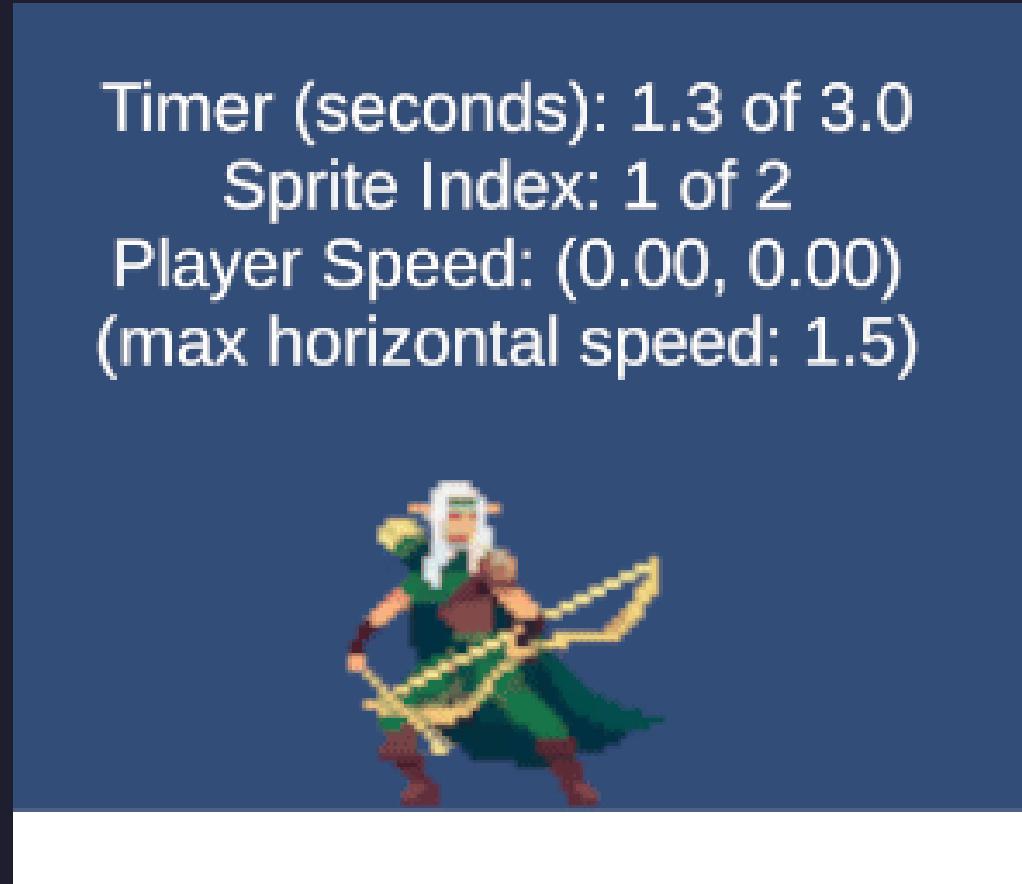


Figure 3: Hero Switching Mechanic
original file @ hero switching.gif

= Player Architecture

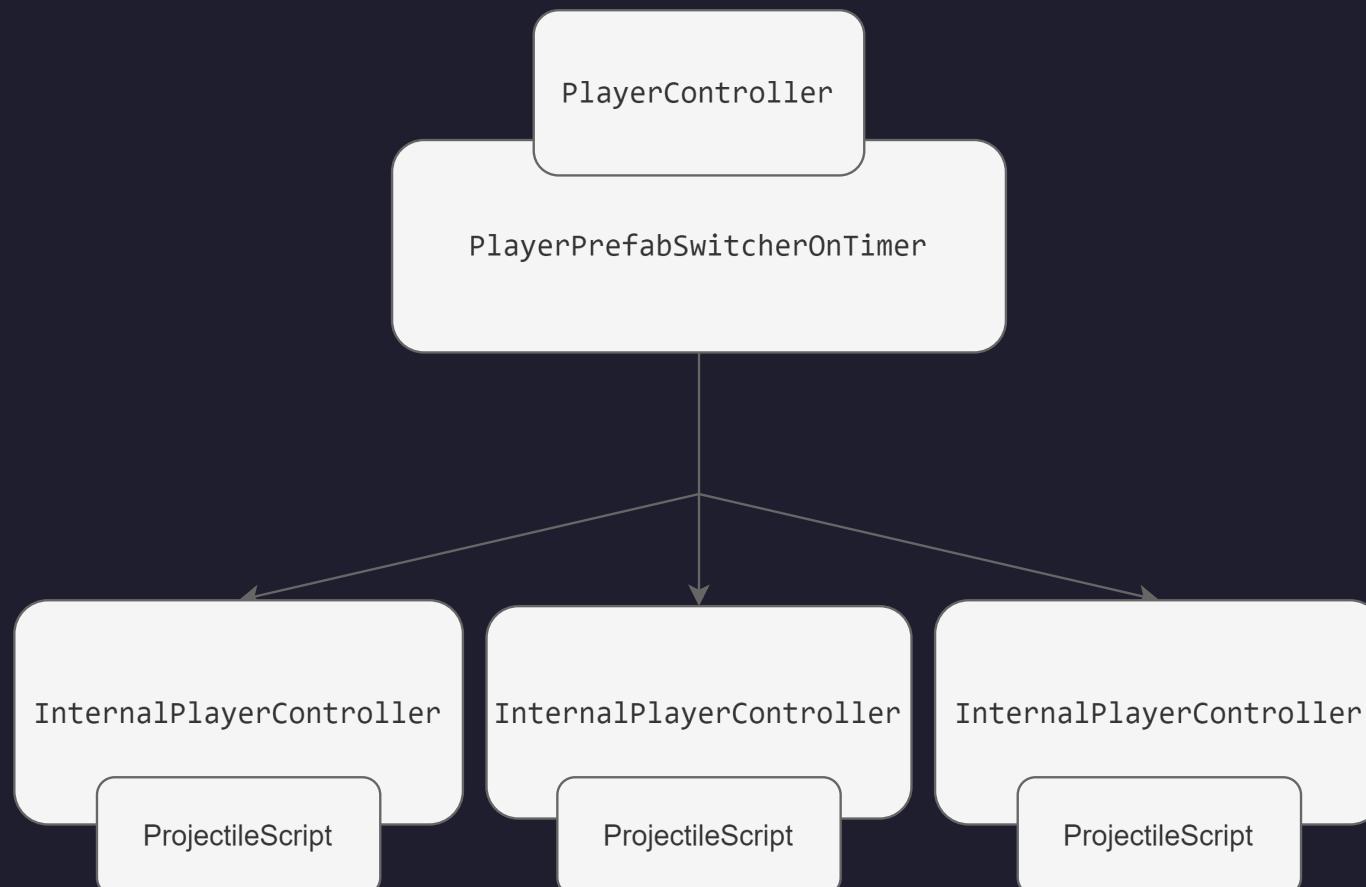


Figure 4: Player Architecture
original file @ player.svg

= Game Maker ToolKit's
2023 Game Jam

Cosmos Conquerors

= 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

= Theme

Roles Reversed

= Gameplay



Figure 5: Screenshot
original file @ Cosmos Conquerors.png

= Main Mechanic



Figure 6: All Invaders Shooting
original file @ invaders shooting.gif

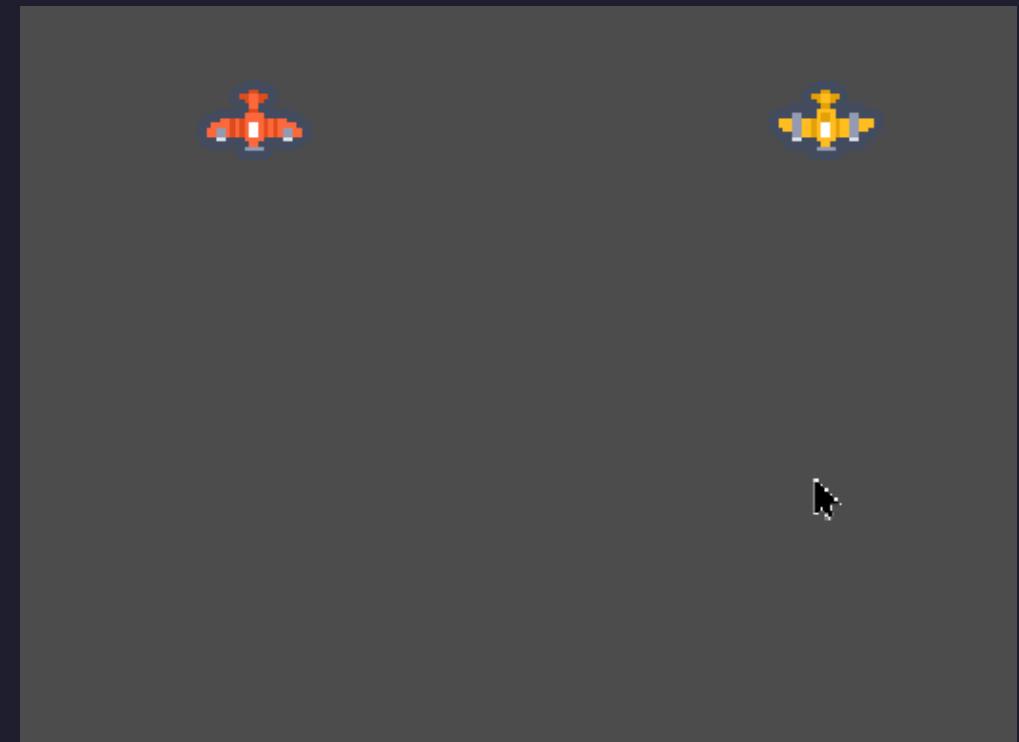


Figure 7: Two Invaders Shooting
original file @ two invaders shooting.gif

= Bevy

Pong

= Other Projects

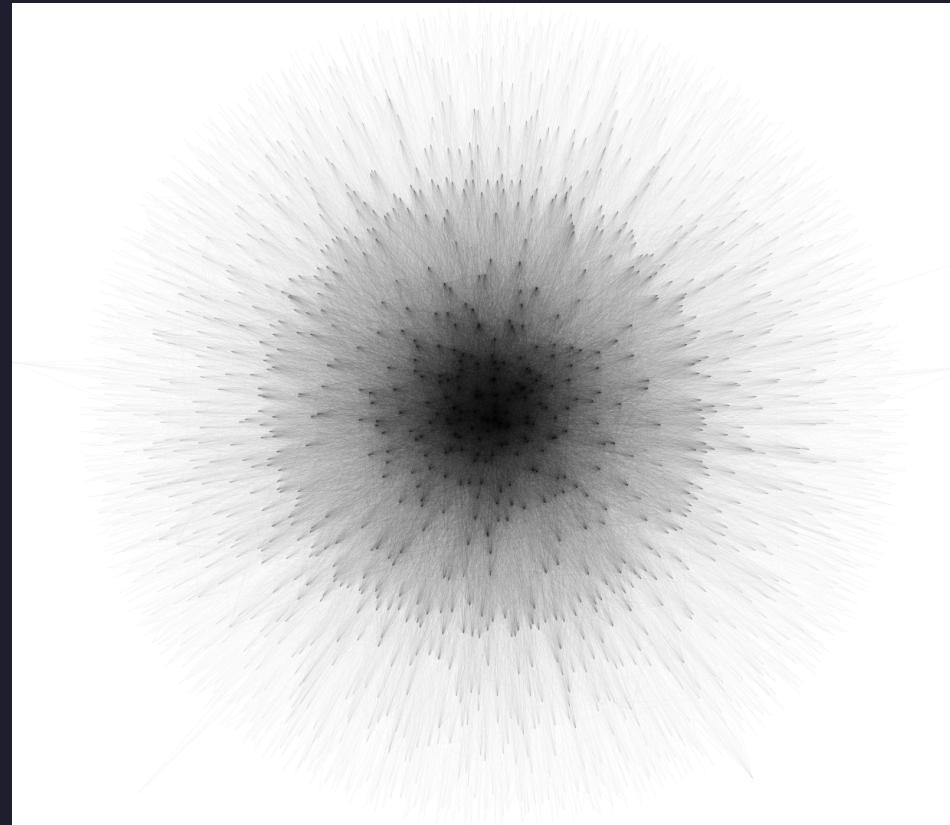


Figure 8: A *VERY* zoomed out view of the graph produced
preview file @ cropped-direct-preview.png
original file @ cropped-direct.jpg

= VRCX Insights

≡ Output Metadata

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 (using typst):

```
#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

Figure 9: One of the spreadsheets generated by the program
original_file @ booth_archiver.png

= Krita/GIMP Palette Generator



Figure 10: Original Image
preview file @ [env-preview.png](#)
original file @ [env.png](#)



Figure 11: Quantized Image
preview file @ [env.png.5-preview.png](#)
original file @ [env.png.5.png](#)



Figure 12: Color palette generated with quantization level 5
original file @ [env.png.5.png.gpl.png.linear.png](#)

= Kait

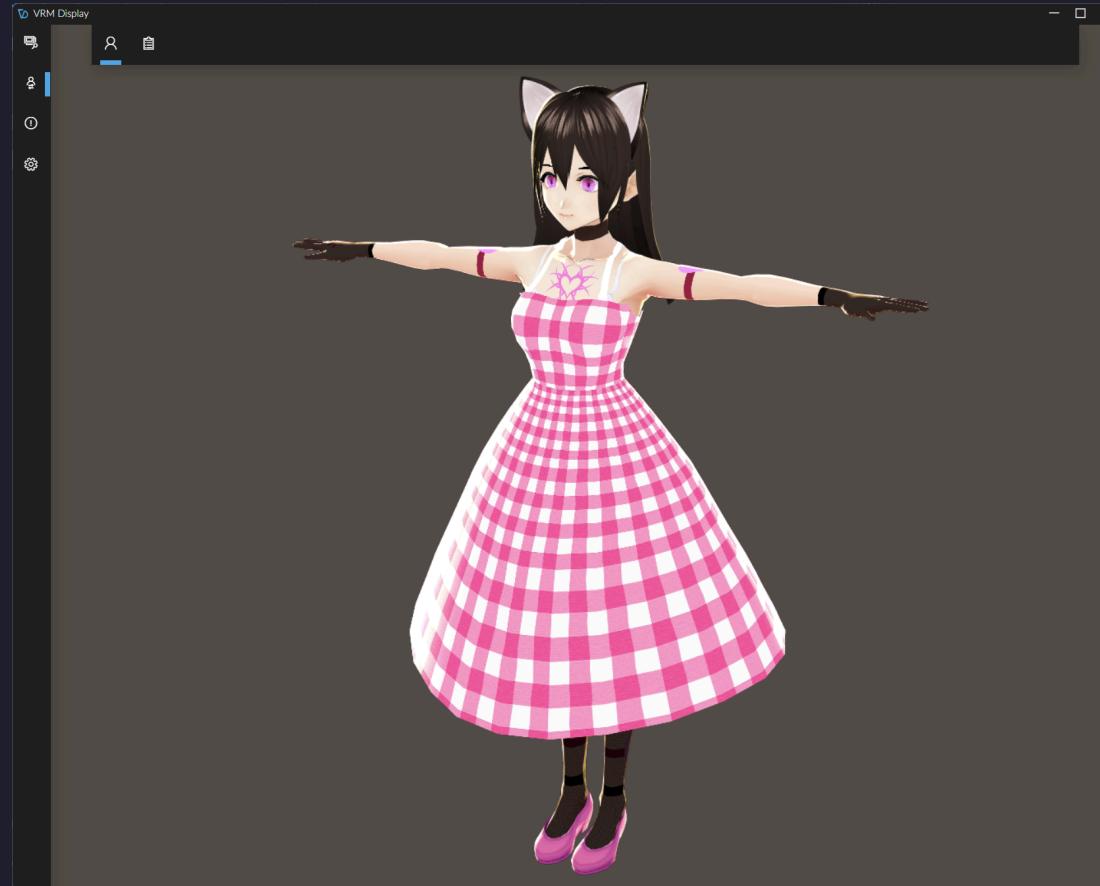


Figure 13: OC Kait - Made with the help of VRoid Studio
original file @ kait.png

= Goals for 2024

These are in no specific order

= Goal – Short Description – Why?

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

= Why Aalto

and also acknowledgements

= Acknowledgement

- fivepb for helping me push through when I wasn't able to
- mlembug for going through the script
- Shashank for checking the presentation
- Divyesh for checking the script, presentation, and video
- 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](#) – an alternative to LaTeX – // sorry couldn't figure out how to do make the logo visible
- [投Touying](#) [Touying](#) – Slides
-  [Catppuccin Theme](#) – Colors 
- [JetBrains Mono](#) – General font
- [Noto Serif](#) — Font for more “creative” aspects

= Appendix

The page numbers refer to the *PDF* page numbers and not the *Slide* page numbers

= List of Images

- Figure 1: Image of me
original file @ me.png 5
- Figure 2: Us
original file @ shashank and me.jpg 9
- Figure 3: Hero Switching Mechanic
original file @ hero switching.gif 10
- Figure 4: Player Architecture
original file @ player.svg 11
- Figure 5: Screenshot
original file @ Cosmos Conquerors.png 15
- Figure 6: All Invaders Shooting
original file @ invaders shooting.gif 16
- Figure 7: Two Invaders Shooting
original file @ two invaders shooting.gif 16

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- Figure 8: A *VERY* zoomed out view of the graph produced
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 - original file @ env.png.5.png
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- Figure 13: OC Kait - Made with the help of VRoid Studio
 - original file @ kait.png

= List of Tables

- Table 1: Coventry University Game Jam Results
- Table 2: GMTK's 2023 Game Jam Results

7

13

= Table of Links

pg no	Accompanying Text	Link Destination
1	Link to slides:GitHub:pawarherschel/ UniOfAalto:condensed- slides.pdf	https://github.com/pawarherschel/UniOfAalto/blob/main/condensed-slides.pdf
2	Coventry University Summer School Game Jam	https://github.com/pawarherschel/CovUniGJ2024
2	Game Maker ToolKits 2023 Game Jam	https://github.com/pawarherschel/GMTK2023
2	Bevy	https://bevyengine.org/

= Table of Links

pg no	Accompanying Text	Link Destination
3	VRCX Insights	https://github.com/pawarherschel/vrcx-insights
3	Booth Archiver	https://github.com/pawarherschel/booth_archiver
3	Krita/GIMP Palette Generator	https://github.com/pawarherschel/krita-palette-creator
5	sakurakat.systems	https://sakurakat.systems
5	GitHub:pawarherschel/Uni0fAalto	https://github.com/pawarherschel/Uni0fAalto

= Table of Links

pg no	Accompanying Text	Link Destination
6	Coventry University Summer School Game Jam	https://github.com/pawarherschel/CovUniGJ2024
6	Fractured Elements	https://pawarherschel.itch.io/fractured-elements
7	Coventry University Game Jam Results	https://itch.io/jam/summer-school-24/rate/2856755
12	Game Maker ToolKits 2023 Game Jam	https://github.com/pawarherschel/GMTK2023
12	Cosmos Conquerors	https://pawarherschel.itch.io/cosmos-conquerors

= Table of Links

pg no	Accompanying Text	Link Destination
13	GMTKs 2023 Game Jam Results	https://itch.io/jam/gmtk-2023/rate/2155150
17	Bevy	https://bevyengine.org/
17	Pong	https://github.com/pawarherschel/bevy-pong
20	VRCX Insights	https://github.com/pawarherschel/vrcx-insights
21	VRCX Insights	https://github.com/pawarherschel/vrcx-insights

= Table of Links

pg no	Accompanying Text	Link Destination
22	Booth Archiver	https://github.com/pawarherschel/booth_archiver
23	Krita/GIMP Palette Generator	https://github.com/pawarherschel/krita-palette-creator
26	WGpu	https://wgpu.rs/
26	Cranelift	https://cranelift.dev/
26	NixOS	https://nixos.org/
26	WGpu	https://wgpu.rs/

= Table of Links

pg no	Accompanying Text	Link Destination
26	Kate Compton	https://www.galaxykate.com/
26	video	https://www.youtube.com/watch?v=WumyfLEa6bU
29	Acerola	https://www.youtube.com/@Acerola_t
29	No Boilerplate	https://www.youtube.com/@NoBoilerplate
29	Typst	https://typst.app/
29	Touying	https://touying-typ.github.io/

= Table of Links

pg no	Accompanying Text	Link Destination
29	Catppuccin Theme	https://catppuccin.com/
29	JetBrains Mono	https://www.jetbrains.com/lp/mono/
29	Noto Serif	https://fonts.google.com/noto/specimen/Noto+Serif
34	Coventry University Game Jam Results	https://itch.io/jam/summer-school-24/rate/2856755
34	GMTKs 2023 Game Jam Results	https://itch.io/jam/gmtk-2023/rate/2155150