ARNE OLEMANS

Engine Developer

PROFILE

Profession
Engine Developer

Passionate About
Rendering programming

Date of birth
09 May 2004

E-mail
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Website
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SOCIAL MEDIA

LinkedIn
https://www.linkedin.com/in/arne-olemans-5b0a03253/

GitHub
https://github.com/KnipTang

STUDENT JOBS

2023 **Unwrap volunteer / Game Jam participant**
Game industry networking event.
GameJam game: Ride of Giri

2022 **Cegeka**
ICT - Highschool internship

WORKING ON

current **ReVengin**
FPS focussed DirectX11 custom C++ game-engine

EXPERIENCE

KnipTang-Engine
A C++ custom game engine.   **Solo Project**

Used Tech
- C++
- Github
- SDL
- GLM
- XInput
- SDL_Mixer
- ImGui
- SteamWorks
- Visual Studio

Used Patterns
- Component system
- Observer
- Double buffer
- Event Queue
- Command
- Pimpl
- Service locator
- State
- Dirty Flag

Features
- Self made collision system.
- Multi-Threaded sound system.
- VSYNC controlled game loop.
- Multiple active scenes.
- Painless scene management.
- RAII memory management.
- Keyboard and Xbox controller support.
- Multiple players input system.

Genetic algorithm for Flappy Bird
Neural network play Flappy Bird perfectly with a genetic algorithm.   **Solo Project**

Used Tech
- C#
- Unity
- GitHub
- Visual Studio

The Neural Network
- 2 Input layers. The length of x & y between the bird and the incoming pipe.
- 6 Hidden layers. Manipulates values for each bird unique weight.
- 1 Output layer. The action of each bird after calculation.

Features
- Average of four generations before desired result.
- Using fittest parent birds to conceive next generations.
- Crossover & mutation.

Form Frenzy
A team project. Co-Op indie party game.   **Group Project**

Used Tech
- C#
- Unity
- Perforce
- Visual Studio

My Responsibilities
- Programmer.
- Game designer.
- Communication and Implementation between artists and programmers.
- Game trailer actor.

Features
- Hole in the wall inspired.
- Rigged based character
- Ragdoll physics.
- Controller support.
- Algorithmic basic difficulty scaling.

EDUCATION

2022 - 2025	**Bachelor - Game Development**	
	Digital Arts and Entertainment	
2024 - current	**Bachelor - Game Development (Erasmus)**	
	Abertay University	
2020 - 2022	**Informatics - Highschool Alumnus**	
	KsDiest	

SKILLS

Main Languages
- C++
- C#
- HLSL

Second Languages
- HTML 5/CSS 3
- JavaScript

Human Languages
- English
- Dutch

Game Engines
- Unity 5
- Unreal 5

Source Control
- Perforce
- Git
- GitHub

Graphics Debuggers
- RenderDoc
- NVIDIA NSYnc graphics

Frameworks/Libraries
- DirectX11
- Vulkan
- SDL
- Dear ImGui
- XInput
- SDL_Mixer
- SoLoud
- GLM
- SteamWorks
- OpenCV