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
www.ArneOlemans.com

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 - Internship

2021
Gardener
At city Diest

2020
Blankedale
Factory worker

EXPERIENCE

KnipTang-Engine   2024
A C++ custom game engine.

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

Engine 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.

2024

Genetic algorithm for Flappy Bird
Neural network that play Flappy Bird perfectly using a genetic algorithm.

The Neural Network
- 2 Input layers, for the length of x and y between the bird and the middle of the incoming pipe.
- 6 Hidden layers, to manipulate the values with each bird unique weight values.
- 1 Output layer, to determine action of bird after calculations.

Algorithm Features
- Average of 4 generations before desired result.
- Using fittest parents birds DNA to conceive next generations using crossover and mutation.

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

Form Frenzy   2024
a team project,
Co-Op indie party game.

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

My Responsibilities
- Lead programmer.
- Game designer.
- Communication between artists and programmers
- Implementation from art. to game engine
- Game trailer actor.

Game Features
- Tv-series, Hole in the wall inspired co-op party game.
- 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/CSS/Flexbox
- JavaScript

Human Languages
- English
- Dutch

Game Engines
- Unity 5
- Unreal 5

Source Control
- Git
- GitHub
- Perforce

Graphics Debuggers
- RenderDoc
- NVIDIA NSYnc graphics

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