Niels Jaspers

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A third year **Game programming student** that currently specializes in graphics programming and is fascinated by the modern solutions that come with the modern graphics APIs and the new hardware that supports such features. A self-motivated team player that provides quality solutions, while also communicating with his peers and keeps up the good work spirit. All, while striving for the best possible end-product.

Experience

SEPTEMBER 2018 – PRESENT
Store clerk (Part-time) | Van der Zalm Verswinkel | Oegstgeest, Zuid-Holland

As a store clerk at Van der Zalm Verswinkel, I am mainly responsible for selling items for our customers' needs. Within this role, I require knowledge on our stock, that helps our customers to make the correct choice. All from advice on which product to choose, to advice on the combination of different products from our store and products that were bought from different stores. All, while remaining customer-friendly and giving them a wonderful experience shopping with us.

JUNE 2024 – AUGUST 2025
Member of the degree programme committee | Breda University of Applied Sciences | Breda, The Netherlands

As a member of the degree programme committee, I fulfill the advisory role to provide feedback (not asked or asked) for the programme, provide advice on new changes asked by management, and sign off on changes to the curriculum.

Projects

Poseidon Engine

My sandbox for experimenting with anything that has to do with the development of games and/or game engines, featuring:

1. DirectX 12 renderer (deferred) supporting terrain deformation, volumetrics and more.
2. Skeletal animation system being able to apply skinning to over 300 meshes on the CPU without any LOD or culling.
3. An editor with a serialization for e.g. mesh placement.

Team size: Solo.

Firefly renderer

A 3D renderer I made with 5 others for my assignment for BUas. We had to create a 3D renderer as a team for two other teams, supporting Windows (using DirectX 12) and PlayStation 5. Not only did we have to focus on getting an end-product for ourselves, but we also had to supply our 'clients', making this an even greater challenge. The features of the renderer we made are:

1. Deferred style renderer
2. Physically based rendering
3. Screen space ambient occlusion
4. Skeletal animation

Team size: 6.

Nakon

An FPS game made with an adjusted version of the firefly renderer. Our target platforms were Windows and the PS5. The game was made with 12 people, where 9 of them were programmers and 3 artists. Link: https://buas.itch.io/nakon

Team size: 12.

Terrain Deformation

This self-study project for BUas was all about preparing myself for the gaming industry as a programmer. I choose terrain deformation using DirectX 12 as a project, as it seemed like a nice challenge.
Link: https://pappaniels.github.io/posts/2025/01/23/Snow-Deformation.html

Team size: Solo.

PlayStation 5 Renderer

A 3D renderer I made for my assignment for BUas. This project was for me to discover all the cool features the PlayStation 5 has to offer. The original assignment was: Create a 3D renderer that is physically based, uses the gltf file format, and fits into an existing engine structure. The features I added were:

1. Image based lighting
2. Shadow maps for directional lights
3. Basics of volumetric rendering

Team size: Solo.

Dusty mayhem

- A couch style game inspired by Mashed in a desert setting, where the goal is to survive the longest on the track. This game was made by 13 people (including me) using Unreal engine as an assignment for BUas, teaching us the core of teamwork needed for making a game on a 'stable' foundation, with designers, programmers and artists.
  Link: https://buas.itch.io/team-salt

  Team size: 13

BUas: Breda University of Applied Sciences

Skills

- **Languages:** Dutch, English, basics of German.
- **Programming languages**: C/C++, HLSL, vendor specific shading language, (CFX)Lua.
- **Math**: Strong knowledge of 3D math, including linear algebra.
- **Platforms**: Windows, PlayStation 5, Xbox One.
- **Graphics APIs**: DirectX 12, DirectX Raytracing, vendor specific.
- **Version control**: Perforce, Git (small and large open-source repositories).
- **Tools**: Visual Studio, Github, RenderDoc, Nvidia Nsight, PIX, vendor specific.
- **Teamwork**: Scrum and agile workflow. Teams with a size of 6 and 13 people.

Education

SEPTEMBER 2016 - JULY 2023

Hoger algemeen voorgezet onderwijs (HAVO) | Visser 't hooft lyceum | Leiden, The Netherlands

SEPTEMBER 2023 – PRESENT

Creative media and game technologies (programming) | Breda University of Applied Sciences | Breda, The Netherlands

Activities

Programming • Playing games with friends • Cooking • Hanging out with friends • Skiing • Sharing knowledge