August van Casteren

Nieuwegein, the Netherlands

Master of Science in Game and Media Technology   AugustVanCasteren@gmail.com

SKILLS

Tools and Languages	C#/.NET, Visual Studio, JS/TS, Godot, C++, DirectX12/HLSL, OpenGL/GLSL, Git, Linux, Pix, HTML/CSS
Communication	Dutch (native), English (expert), French (intermediate), German (intermediate), Chinese (novice)
Other	(GPU) algorithms, low-level optimization, multi-threading, computer architecture, game design, computer networking

RELEVANT PROJECTS

Indirect Caustics	DirectX12, C++	A real-time ray tracer capable of rendering physically based caustics in 2-3ms, based on previous research, and rendering indirectly visible caustics in real-time, which was previously impossible. Demo video link Thesis link
Whitted Shaders	OpenTK (C#), GLSL	A real-time software ray tracer (does not use RT cores) capable of handling millions of objects and billions of triangles using a BLAS (BVH), and a TLAS (BVH) which refers to the BLAS at its leaves. Demo video link, GitHub link
Crusade Idle	Godot (C#)	An incremental game fully designed, implemented, and published by me, played by thousands of users. Game link
Royal Crusade	Godot (C#)	An online strategy game currently in development. The game has gone through several successful cycles of live play-testing and refinement, with hundreds of users in a single world. Playable in the browser and on phones.

RECENT WORK EXPERIENCE

Full-Stack software developer   **Feb. 2024 - Present**
Maxdoro B.V.   *Amersfoort, the Netherlands*

- Back-end development with ASP.NET MVC with C#
- Front-end development with TypeScript, Lit, Angular and more

Ray-tracing research internship   **Oct. 2022 - May 2023**
Advanced Micro Devices (AMD)   *Munich, Germany*

- Reading research, formulating research questions and a plan of approach
- Implementing a state-of-the-art ray-tracing algorithm
- Designing and Implementing improvements
- Presenting the findings in my thesis

Independent game development   **May 2023 - Present**
Augustvc   *Nieuwegein, the Netherlands*

- Designing, developing, and distributing games
- Implementing and deploying a game server

Freelance IT work   **2018 — 2023**
Mooiboek   *Beekbergen, the Netherlands*

- Maintaining and updating website
- Providing help with PCs and handheld devices

EDUCATION

Master of Science in Computer Science (profile: Game and Media technology), *Utrecht University*
Bachelor of Science in Computer Science (profile: Gametechnology), *Utrecht University*

RESEARCH ARTICLES

Extending AAPS for higher quality caustic rendering *August van Casteren*   May 2023
Navigation and exploration in 3D-game automated play testing *Wishnu Prasetya, August van Casteren, 12 others*
Oct. 2020