JULIAN **HEINKEN**

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EDUCATION

Hamburg University of Applied Sciences | *BASc Media Systems* **2016-2021**
- Thesis: Texel-Space Rendering with the Oculus Quest

Wirtschaftsgymnasium Göhlbachtal **Hamburg**
- Abitur 2014

EXPERIENCE

Symmetry Break Studio GmbH **Sep 2021 – Present**
Co-Founder and Technical Director Hamburg, Germany
- Co-founded a GmbH to create video games and tools.
- Lead Developer and Technical Artist on Misgiven (2D narrative game) in Unity.
- Developed and released shader asset for the Unity Asset Store.

Super Crowd GmbH **Hamburg, Germany**
Graphics Programmer Juli 2020 - March 2022
- Built an in-house 2D rendering system on top of Unity that trivialized the creation of isometric 2D worlds and re-skinning of sprites.
- Built tools for level- and game designers to speed up workflow and game performance.
- (For Threaks GmbH) Ported a custom Unity graphics pipeline to the Universal Rendering Pipeline (URP).
- Gameplay programming.

VR Nerds GmbH **Hamburg, Germany**
Unity Developer (Working Student) July 2018 - Sept. 2018
- Created specialized shader for VR and order independent transparency.
- Various art for VR Game Tower Tag.

Realities.io Inc. **Berlin, Germany**
Graphics Programmer (Intern) Feb 2018
- Implementation of an AI-based image upscaler in Unreal Engine 4.
- Photogrammetry basics.

Lucid Trips Team **Hamburg, Germany**
Unity Developer June 2015 - Oct 2017
- Helped develop Lucid Trips, an open-world VR game with experimental locomotion controls.
- Created designer-requested tech art, such as a global footprint system or interactive grass.
- Developed tools to integrate large meshes into Unity.
- Gameplay-Programming and VR-specific optimizations.

Freelancing work **Hamburg/Remote, Germany**
- Supported porting a Unity game to PlayStation 4 and Switch.
- Implemented multiple VR experiences for fairs and exhibitions.
- VFX work for unannounced VR-Film project.

SKILLS

Programming languages C# (advanced), C (intermediate), Rust (intermediate), C++ (intermediate), Zig (basics), Python (basics), JavaScript (basics), SQL (basics)

Developer Tools Visual Studio, Rider, RenderDoc, NSight, Git, SVN

Art Tools Photoshop, GIMP, Houdini, EmberGen, Substance 3D Designer

Language German (mother language), English (fluent), Spanish (basic), Japanese (basic)

Interests Bouldering, Music (drums, synthesizers, DAWs).

PROJECTS

Misgiven | *Steam Page*   TBH
- A narrative 2D-Game with a unique dialogue system, made in Unity.
- Entire game logic, VFX and level lighting.
- Build a custom Signed-Distance-Field framework for UI animations.

Screen Space God Rays (Unity Asset) | *WebGL Demo*   2024 (pending)
- God Ray Shader for Unity with support for 3D, 2D and VR.
- In-depth optimizations in HLSL for maximum GPU usage.

Unnamed C++ Game Engine | *Demo Video*   2022+
- Hobby 2D-Engine on top of *Raylib* for PC and Web.
- Editor application with UI (via Dear ImGui), undo/redo, load/save and basic transform support.
- Support for Spine, Yarn Spinner (basics) and path finding.

Super Crowd Framework (discontinued) | *Project Page*   2020-2022
- Framework in Unity for WebGL-based online events during the pandemic.
- Used for: Indie Arena Booth 2021 & 2022, Dream Hack Beyond 2022, Hamburg Games Conference 2022 and many others.
- Art pipeline tool that makes sprites reusable by making colors replaceable.
- Developed shader for sorting-free 2D isometric rendering in Unity.
- Connected codebase to external analytics system.
- Developed an auto-balancing system for XP point distribution

Battle Planet - Judgment Day | *Steam Page*   2019
- Freelance work for Threaks as a Unity-Developer.
- Implemented achievement and leaderboard system for PlayStation 4 and Switch.
- Additional Tech-Art support.

Lufthansa Air Swing VR Experience| *Project Website*   2019
- Freelance work for Demodern as a Unity-Developer.
- Game Logic implementation

Lucid Trips | *Steam Page*   2015-2017
- An open world VR game with experimental locomotion.
- Implemented persistent footsteps, interactive grass and various other VFXs.

CERTIFICATION & AWARDS

2020 Deutscher Computerspiel Preis - Sonderpreis der Jury

2023 Deutscher Entwicklerpreis 2023 - Best Newcomer (Nominated)