CV - TOBIAS BRANDNER

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EDUCATION

MSc in Computer Science - Specialization in Artificial Intelligence Grade **1.5**
Julius-Maximilian-University Würzburg *April 2021 - September 2024*
Thesis topic: Real-time rendering super resolution with Unreal Engine 5
Notable courses: Computational Geometry, Machine Learning for NLP, Programming with neural nets

BSc in Games Engineering Grade **1.8**
Julius-Maximilian-University Würzburg *October 2017 - September 2021*
Thesis topic: Crowdsourced Help Facility Design and Management for Authoring Platforms

EXPERIENCE

Research Assistant, Julius-Maximilian-University Würzburg *November 2021 - August 2023*
Technologies: Unity, C#

- Worked on the open-source framework ViaVR which creates VR apps for medical treatment.

Teaching Assistant, Julius-Maximilian-University Würzburg *August 2021 - August 2023*
Technologies: C++, OpenGL, CMake

- Tutored game engine development, teaching the basics of rendering, input handling and game loop.

Internship Software Developer, Gentle Troll Entertainment GmbH *March 2021 - June 2021*
Technologies: Unity, C#

- Developed a serious game for teaching children about management in sports.

PROJECTS

Real-Time Rendering Super Resolution with Unreal Engine 5 Github
Technologies: Python, Pytorch, Unreal Engine 5

- Developed a neural method to increase resolution from 1080p to 4k and image quality in real-time.

Abyssal Enigma - Dive In Edition Itchio
Technologies: Unreal Engine 5, C++, VR, Blender

- Developed a first person deep sea exploration game and ported it to VR.

Eternal Game Engine Github
Technologies: C++, OpenGL, PreMake

- Developed a game engine with OpenGL as render backend and an editor written with Dear ImGui.

PUBLICATIONS

Analysis and Generation of Flow in 3D Jump'n'Run Games. PDF
2024 IEEE Conference on Games (CoG). Tobias Brandner, Marc Mußmann, and Sebastian von Mammen.

SKILLS

Languages:	Python, C++, C#, Rust, Java
Frameworks/Libraries:	Pytorch, Matplotlib, Pandas, OpenGL
Game Engines:	Unreal, Unity, Godot
Tools:	Git, CMake, Blender