Yannik Brehm

Birth: 29.08.1993

Software Developer
Düsseldorf, Germany

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GitHub Profile
LinkedIn Profile

Education

•M.Sc. Media Informatics *Feb 2019 - Feb 2022*
University of Applied Science, Düsseldorf Grade: A+
Thesis: "Implementation and Evaluation of a Deep Learning Based Dereverberation Algorithm for Speech Signals" - honors degree

•B.Eng. Media Technology *Sep 2012 - Nov 2017*
University of Applied Science, Düsseldorf Grade: B
Thesis: "Room Acoustics and Digital Room Correction Systems for Recording Studios"

Work Experience

•Backend Software-Developer *Dec 2021 - present*
Dear Reality GmbH (Sennheiser Group) Full-time
– C++ and C backend development of real-time audio applications
– Python development of offline audio applications and data serialisation tools
– Audio systems tuning through critical listening and measurements
– Processes follow the guidelines of test-driven development, modern C++ and Scrum

•Audio DSP Researcher / QA Engineer *Feb 2019 - Nov 2021*
Dear Reality GmbH (Sennheiser Group) Work Study
– Research and development of audio DSP algorithms and test automation tools
– Engineering for quality assurance

•Research Assistant *Mar 2019 - Dec 2019*
University of Applied Science, Düsseldorf Work Study
– Acoustic and electrical measurements, electrical engineering, audio DSP research

•Acoustic Engineer *Oct 2016 - Feb 2019*
ISRW Klapdor GmbH Full-time (Oct 2017 - Oct 2018) / Work Study
– Acoustic measurements, acoustic simulations, acoustic consultancy

Projects

•Dear Reality Exoverb *2022*
Backend Developer
– Contributed to the development of a synthetic reverb DAW-plugin
– In particular: Development of a C++ backend for realtime audio processing

•Dear Reality dearVR Mix / Monitor *2021*
Audio-DSP Researcher, Audio System Tuning Engineer
– Contributed to the development of a DAW-plugin for binaural monitoring and mixing
– In particular: Development, measurement and tuning of headphone equalisation filters

•Digital loudspeaker design and construction based on a Grimm LS1 *2021*
Fullstack (University project)
– Complete design and build of a high-end digital loudspeaker system
– Including: Acoustic measurements, acoustic simulations, electrical engineering, DSP filter design, PCB design, CNC milling, woodworking, painting, etc.

Technical Skills and Interests

Languages: English(fluent), German (native)
Programming Languages: C, C++17, Python
Developer Tools: Azure, CMake, Conan, Docker, Eagle, Git, LaTeX, Pure Data, Vim
Frameworks: FlatBuffers, GoogleBenchmark, GoogleTest, JUCE, NumPy/SciPy, pybind11, PyTorch/TensorFlow
Audio Software & Tools: Ableton Live, Reaper, REW, RePhase, Nuendo/Cubase, WinISP
Managment Frameworks: Kanban, Scrum
Areas of Interest: Acoustics, audio engineering, coding, critical listening, electrical engineering, music