Simon Zimmermann

Curriculum Vitae

PERSONAL DETAILS

Birth	June 5, 1993
Location	Düsseldorf, Germany
Mail	mail@simonzimmermann.com
Github	github.com/SimonZimmer

WORK EXPERIENCE

C++ Backend Software Developer 2022-present

Dear Reality GmbH, Full-time

Backend research and development of digital signal processing algorithms and API design using C, C++, and Python

C++ Fullstack Software Developer 2020-present

Dear Reality GmbH, Full-time

Full-stack development of real-time desktop audio applications following test-driven development, modern C++, and agile project management principles

Researcher / QA Engineer (Working Student) 2017-2020

Dear Reality GmbH, Part-time

Research and development of digital signal processing prototypes, quality assurance, and test automation development

Room-Acoustics Engineer (Working Student) 2016-2017

ISRW-Klapdor, Part-time

Simulation and design of room-acoustic properties and in-situ acoustic measurements

PROJECTS

dearVR Exoverb 2022

Backend Developer

Developed the DAW-plugin "Exoverb," which uses synthesized reverb impulse responses and additional processing to generate realistic reverberation effects

Team Split Facilitation 2022

Backend Developer, DevOps Engineer

Facilitated the transition from a single-team solution to a frontend/backend split. Extended the technology stack with Conan, Microsoft Azure, Pure Data, and C

dearVR MIX/MONITOR 2021

Full Stack Developer

Developed the DAW-plugins "dearVR MIX" and "dearVR MONITOR," which utilize headphone calibration, room simulation, and binauralization to virtualize professional studio environments. These plugins also simulate multichannel audio playback

PUBLICATION

Co-Author 2021

Conference Paper, Immersive and 3D Audio: from Architecture to Automotive (I3DA): "Machine Learning-Based Room Classification for Selecting Binaural Room Impulse Responses in Augmented Reality Applications"

EDUCATION

M.Sc. Media Informatics 2018-2020

University of Applied Sciences Düsseldorf

Thesis title: 'Scalable Modelling of Room Acoustic Characteristics for AR-devices on the Basis of Visual Information Using Deep Learning' - honors degree.

M.Sc. Music Informatics 2018

University of Music Karlsruhe

Guest Semester

B.Eng. Media Engineering 2012-2017

University of Applied Sciences Düsseldorf

Thesis title: 'A Concept for Implementing Room Acoustic Material Properties in the Context of a 3D-Audio Engine'

SKILLS

Languages	German (mother tongue) English (fluent)
Technologies	C++17 CMake conan boost googletest/googlemock google-benchmark C99 Python Pure Data (Pd) Linux git nvim/vim docker conan Azure DevOps Github Actions Jenkins POSIX MATLAB LaTeX JUCE pybind11 flask wagtail
Other	Music Production Modular Synthesizer Esoteric Programming Lanuages (Orca, TidalCylces)