



# Simon Zimmermann

*Curriculum Vitae*

## PERSONAL DETAILS

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<i>Birth</i>	June 5, 1993
<i>Location</i>	Düsseldorf, Germany
<i>Mail</i>	<a href="mailto:mail@simonzimmermann.com">mail@simonzimmermann.com</a>
<i>Github</i>	<a href="https://github.com/SimonZimmer">github.com/SimonZimmer</a>

## EDUCATION

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### MSc. 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

### MSc. Music Informatics

2018

*University Of Music Karlsruhe*

Guest Semester

### BEng. 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'

## WORK EXPERIENCE

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### 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 realtime desktop audio applications. Process follows the guidelines of the test-driven development philosophy, modern C++ and agile project management.

### 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, in-situ acoustic measurement

## PROJECTS

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### dearVR Exoverb

2022

*Backend Developer*

Contributed to the Development of the DAW-plugin "Exoverb". The plugin uses synthesized Reverb Impulse Responses and additional processing to generate a realistic reverb effect

### Team Split Facilitation

2022

*Backend Developer, DevOps Engineer*

Contributed to transitioning from a one-team solution to a frontend/backend split into two teams using conan, Microsoft Azure, pure-data and C as the extended technology stack

### dearVR MIX/MONITOR

2021

*Full Stack Developer*

Contributed to the Development of the two DAW-plugins "dearVR MIX" and "dearVR MONITOR". The plugins utilize Headphone Calibration, Room Simulation and Binauralization to virtualize a professional studio environment using only headphones. Plugins are also capable of simulating multichannel-audio playback

## PUBLICATION

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### 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"*

## AWARDS

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### Composer, Producer

2020

*Best contribution "!"content" in the category Acoustic Stories, "Sound Cinema Düsseldorf"*

### Composer, Producer

2020

*Audience award for contribution "!"content", "Sound Cinema Düsseldorf"*

## SKILLS

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### Languages

German (mother tongue)

English (fluent)

### Technologies

C++17

CMake

conan

googletest/googlemock

google-benchmark

C99

Python

Pure Data (Pd)

Linux

git

nvim/vim

docker

conan

Azure DevOps

Jenkins

POSIX

MATLAB

L<sup>A</sup>T<sub>E</sub>X

JUCE

pybind11

flask

wagtail

### Other

Music Production

Modular Synthesizer

Esoteric Programming Languages (Orca, TidalCycles)