Niklas Reppel

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Work Experience & Internships

since 2022   **Audiotool Inc**, *Remote*, Software Developer
Audio software development in Rust

2021, 2022   **ENTI Sound**, *Barcelona*, Lecturer
Technical sound design for video games

2017 – 2022   **Eurecat**, *Barcelona*, Research & Development
3D & binaural audio software, plugin & DSP library development, machine learning research

2015 – 2016   **University of Music**, *Karlsruhe*, Graduate Teaching Assistant
Autonomous planning & implementation of programming courses (C++)

2015 – 2016   **Hochschule f. Technik & Wirtschaft**, *Karlsruhe*, Teaching Assistant
Excercise groups for C++, digital sound processing, embedded systems

2014 – 2015   **VBL AdöR**, *Karlsruhe*, Side Job
Data management

2010 – 2014   **Genius Bytes GmbH**, *Bochum*, Software Developer
Server & client applications for print output management, print accounting, multi-functional printers

2006 – 2009   **Völker GmbH**, *Witten*, Side Job
Warehouse logistics

2004,2005   **14. und 15. Internationales Video Festival**, *Bochum*, Internship
Program selection, logistics, organisation, hosting

2002 – 2004   **Divasoft**, *Dortmund*, Internship
Music- & media production

2003 – 2004   **Falken Bildungs- und Freizeitwerk e.V.**, *Witten*, Civilian Services
Supervising kids & adolescents in youth club, excursions, events

Education

2014 – 2016   **University of Music**, *Karlsruhe*, Music Informatics
Master of Arts (1.0*)

2006 – 2013   **Technische Universität**, *Dortmund*, Computer Science
Bachelor of Science (2.8)

2004 – 2006   **Technische Universität**, *Dortmund*, Applied Literary and Cultural Studies
Minor subjects: music, computer science

Spoken & Written Languages

- German (mother tongue)
- Castilian Spanish (conversational)
- Italian (good knowledge)
- English (business fluent)
- French (good knowledge)
- Japanese (basic knowledge)

Software Development Qualifications

General	Digital sound processing, domain specific languages, embedded systems, audio pattern recognition (bachelor thesis), amplifier modeling (master thesis), 3D & binaural audio processing
Languages	Rust, WASM, C/C++ 11/14/17, Python, Common Lisp, PureData, JavaScript, SuperCollider, Java
Frameworks & Libraries	JUCE, Boost, RtAudio, NumPy, PyTorch, Keras
Tools	Git, Cargo, Eclipse, XCode, Cmake, Jupyter Notebooks
OS	Linux (div. distr.), Windows, Android, iOS
Misc	Physical computing, arduino, sensors, Raspberry Pi, live coding

Conference Talks, Presentations & Workshops

2020 **International Conference on Live Coding**, *Limerick*, Paper Presentation
The Mégra System - Small Data Music Composition and Live Coding Performance

2019 **RustFest**, *Barcelona*, Talk
Amp Up Web Audio Applications with Rust and WebAssembly

2019 **International Conference on Live Coding**, *Madrid*, Workshop
Probabilistic Live Coding with Megra and Common Lisp

Music

Production	Music Production Experience:

- over 15 years experience in home-, field- and studio recording
- miking, recordings w/ several bands
- studio tools (Reaper, Ardour, Ableton, ProTools, PureData)

Live	Live Music Experience:

- active in the local & global live coding scene
- stage- and touring experience from over 100 live concerts
- live coding & laptopism
- proficient on guitar, drums and bass guitar
- music for silent films & theater

Misc	Masterclasses with Denis Smalley, David Thomas Lee, Jörg Lindenmayer
form. Bands	ENKUD (link), Brainflow Management (link), Compania Bataclan (link)

Personal Interests

- Road Cycling
- Neuropsychology
- Algorithmic Composition