



Jaime Castresana Iza

Software Engineer | Audio, DSP Tools & Technical Product Development

PROFILE

Software engineer with an MSc in Sound and Music Computing and experience developing product software, technical tools, and validation workflows for audio and acoustic engineering. My background combines software development, signal processing, psychoacoustic sound-quality analysis, embedded audio, automated testing, and collaboration with domain specialists. I am motivated by roles where audio knowledge and strong engineering practices can be used to develop reliable tools, workflows, and products with meaningful user impact.

WORK EXPERIENCE

Software Engineer

Hottinger Brüel & Kjær | September 2023 - Present

- Developed commercial acoustic-engineering software from proof of concept and MVP stages toward product release.
- Built workflows for acoustic analysis, model comparison, validation, and measured-versus-predicted sound evaluation.
- Contributed to a sound-quality proof of concept using loudness, sharpness, roughness, and tonality, including workflow design and user evaluation.
- Improved product reliability through automated testing, validation workflows, code review, and CI/CD practices.
- Worked with acoustic specialists, Product Owners, designers, and architects to translate technical needs into usable product features.

R&D Software Assistant

ICEpower A/S | May 2022 - June 2023

- Supported audio-amplifier R&D through software development, result analysis, and repeatable network stress-testing workflows.
- Designed and evaluated digital crossover processing for a loudspeaker system on an ARM Cortex-M7 as part of my MSc thesis.
- Implemented signal-processing methods in C/C++ under embedded constraints and evaluated their effect on loudspeaker response.

EDUCATION

MSc Sound and Music Computing

Aalborg University, Copenhagen Campus | September 2021 - June 2023

BSc Industrial Technology Engineering

University of Deusto | September 2015 - June 2020

SELECTED PROJECT

SoundLens - AI-Assisted Acoustic Investigation Platform

github.com/jci24/SoundLens

- Developing an audio-analysis platform for comparing recordings, selecting regions of interest, and inspecting waveform, spectrum, and signal-metric evidence.
- Implemented A/B comparison, RMS, peak, crest-factor and clipping analysis, playback, and structured reporting.
- Designed deterministic DSP calculations with traceable units, analysis scope, and documented limitations.
- Built with C#.NET, React, and TypeScript, supported by automated backend and frontend testing and CI.

CONTACT

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PROFESSIONAL SKILLS

- Audio and acoustic software development.
- Signal processing and psychoacoustic sound-quality analysis.
- Technical tool and workflow development.
- Testing, validation, and result interpretation.
- Embedded-audio and real-time DSP foundations.
- Cross-functional R&D and product development.

SOFTWARE & TOOLS

- C#.NET, Python, MATLAB, and C/C++.
- React and TypeScript.
- Git, Azure DevOps, automated testing, and CI/CD.
- APIs, Linux, and WSL.

PERSONAL COMPETENCIES

- Analytical and structured.
- Curious and quick to learn.
- Collaborative across disciplines.
- Pragmatic and quality-focused.
- Comfortable with technical experts and stakeholders.
- Proactive and accountable.

LANGUAGES

- Spanish: Native
- English: C1
- Danish: A2
- French: B1