

Employment

01/2022 - Present **CoreAudio Software Engineer, Apple**

- C++ Audio Software Engineer on the Audio Routing team in CoreAudio
- Supporting audio software bring-up on new Apple iOS, watchOS, visionOS, and tvOS based products and audio accessories
- Triaging and debugging audio issues

06/2016 - 01/2021 **C++ Software Engineer, JUCE**

- One of the lead developers of JUCE, an open-source, cross-platform C++ framework
- Working on all aspects of the codebase from low-level operating system APIs to high-quality audio algorithms, graphics backends, networking features and audio plug-in wrappers, implementing public-facing APIs used by thousands of developers
- Managing CI/CD and associated infrastructure, unit testing, and release pipelines
- Daily interaction with users prioritising, fixing, and responding to bug reports
- Providing training and workshops at various events and conferences as well as paid premium support contract work
- ~2000 public commits on the public repository at <https://github.com/juce-framework/JUCE>

12/2015 - 06/2016 **Freelance Software Developer**

- Designing and developing Kontakt and Reason sampler plug-ins with various sample library companies using KSP, Jukebox and Lua scripting

06/2015 - 09/2015 **UWE Creative Technologies Intern**

- Implementing an interactive evolutionary computation interface in C++ with a web frontend for the danceroom Spectroscopy project to be used in installations

Education

2013 - 2016 **BSc (Hons) Audio and Music Technology, UWE Bristol**

- First Class Honours Degree
- Awards:
 - **UWE Dean's Award for Academic Excellence in the Faculty of Environment and Technology (2013/14)**. Awarded for achieving an overall average mark of 75% or more across all modules
 - **UWE Pendlebury Tucker Prize (2014/15)**. Awarded for highest marks in year group
 - **UWE Pendlebury Tucker Prize (2015/2016)**. Awarded for the best project by a final year student

Publications and Talks

- *Making JUCE Accessible*, ADC 2020 - <https://www.youtube.com/watch?v=BqrEv4ApH3U>
- Mitchell, T., Bennett, P., Madgick, S.O.H., Davies, E. and Tew, P. TIEC: Tangible Interactive Evolutionary Computation. *In Proceedings of the ACM SIGCHI Conference on Human factors in computing system*. San Jose 2016
- Davies, E., Phillip, T., Glowacki, D., Smith, J., Mitchell, T. Evolving Atomic and Molecular Aesthetics. *5th International Conference on Evolutionary and Biologically Inspired Music, Sound, Art and Design*. Portugal, 2016

Patents

- *Method and System for Contextual Volume Control*, US20240361975A1, filed Mar 14, 2024 - <https://patents.google.com/patent/US20240361975A1/en?q=US18605390>

Skills

- **Languages:** C++, C, Objective-C, Swift, Java, ARM/NEON/SSE/AVX assembly
- **Scripts:** Python, Lua, shell
- **Operating Systems:** macOS, Windows, Linux, Android, iOS, *nix
- **Tools:** Git, CMake, Make, Xcode, Visual Studio, Valgrind, perf, Intel Inspector, Instruments