



Filipe Coelho

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Online Profile

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Filipe Coelho

Software Developer

About Me

Self-taught software developer, with personal interest in C++ and Python. Easily motivated by a good challenge. Open-Source enthusiast.

Software Development Skills

Programming Languages

- C
- C++
- JavaScript
- Python

Programming Frameworks

- DPF
- JUCE
- Qt
- HTML5/CSS3/ES6

Programming Systems

- Bash scripting
- Docker
- POSIX/macOS/win32 APIs
- Debian packaging
- Git
- Web Assembly

Created Open-Source Projects

- **KXStudio** - *kx.studio* - 2009
Desktop tools and Debian-based repositories, focused on audio production.
- **Cardinal** - *cardinal.kx.studio* - 2021
Virtual modular synthesizer, based on VCV Rack. Self-contained audio plugin and standalone app.
- **Carla** - *kx.studio/carla* - 2011
Fully-featured cross-platform audio plugin host. Loads several formats plugins and sample banks, and also works as an audio plugin itself.
- **DPF** - *github.com/DISTRHO/DPF* - 2011
C++ framework to create real-time cross-platform audio plugins. Provides UI support using Cairo or OpenGL.
- **DPF-Plugins** - *github.com/DISTRHO/DPF-Plugins* - 2012
A collection of real-time audio plugins, based on DPF.

Work Experience

September 2015 - September 2017, May 2019 - October 2023, Lead Software Developer, MOD Devices GmbH / MOD Audio UG

- Creation of a highly-optimized, real-time Linux embedded system
- Programming of a complex HTML interface and webserver
- Programming of real-time audio applications and plugins

Technologies used: Buildroot, C, C++, Docker, HTML5, JavaScript, Python

October 2018 - May 2019, Software Developer, BEWATEC

- Full-stack developer

Technologies used: AWS, Node Express, Go, ReactJS

September 2017 - October 2018, Software Developer, Snuk

- Full-stack developer

Technologies used: Ansible, Django, Docker, Go, GCP, Grafana, ReactJS



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Interests

Professional

- Creation of desktop applications
- Software development focused on high-performance, with real-time requirements in mind
- Software with hardware integration

Personal

- Audio production (FL Studio, Renoise and self-made applications)
- Linux and Open-Source enthusiast

Publications and Presentations

2019, *Past, Present and Future of the JACK Audio Connection Kit*, Sonoj

<https://media.ccc.de/v/sonoj2019-1902-jack-past-present-future>

2018, *An explanation of various plugin formats and why they exist*, Sonoj

<https://media.ccc.de/v/sonoj2018-1803-plugin-formats>

2018, *Carla feature overview and workflows*, Linux Audio Conference

https://media.ccc.de/v/lac2018-24-carla_plugin_host_feature_overview_and_workflows

2017, *Carla Demonstration and Workflows*, Sonoj

<https://media.ccc.de/v/sonoj2017-1704-carla-plugin-host>

2017, *Team presentation about the MOD*, Linux Audio Conference

<https://youtu.be/kmil9luagVk>

2016, *LV2 Plugin Publishing for MOD*, Linux Audio Conference

<https://media.ccc.de/v/minilac16-publishingyourlv2>

2016, *Making Plugins with DPF*, Linux Audio Conference

<https://media.ccc.de/v/minilac16-ltsmakesomeplugins>

2015, *Carla Presentation*, Linux Audio Conference

<https://lac.linuxaudio.org/2015/video.php?id=47&h=576>

2015, *Testing audio plugins with Carla*, Linux Audio Conference

<https://lac.linuxaudio.org/2015/video.php?id=70&h=576>

2015, *Personal Interview*, Libre Music Production

<https://libremusicproduction.com/articles/friday-interview-2-falktx>

2015, *Publication about Carla*, Linux Magazine

<https://www.linux-magazine.com/Issues/2015/175/Carla>

2014, *DPF Presentation*, Linux Audio Conference

<https://lac.linuxaudio.org/2014/video.php?id=91&h=720>