

Sam Mackie – Audio Programmer

Developer passionate about procedural audio systems for games.

sam.g.mackie@gmail.com | sammackie.co.uk | <https://github.com/sgmackie>

EXPERIENCE

Creator - Polar (October 2018 - Ongoing)

Created a real-time game audio engine for Windows and Linux that leverages GPUs for DSP processing. Features include a voice playback and mixing system, additive synthesis modules and procedural audio demonstrations (C/C++, CUDA).

Creator - Wwise Suite (March 2019 - Ongoing)

Created a set of audio effect plugins to extend the Wwise middleware. Suite includes a bitcrusher and transient designer (C/C++).

Sound Designer - Insight (March 2017 - June 2017)

Recorded, designed and delivered assets for a crowdfunded arena FPS game to be released on Steam (Reaper).

EDUCATION

Solent University - MSc Computer Engineering (September 2018 – September 2019)

Modules:

Designed and tested databases for the web (SQL).

Implemented and deployed a RESTful API for web applications (PHP, Javascript).

Planned, coded and debugged object-oriented programs for the hotel industry (Java).

Researched and presented the latest technical trends in networking and cyber security.

Final Project:

Researched, developed and benchmarked the performance of a suite of real-time procedural audio techniques when applied to GPGPU computing (C/C++, CUDA).

Keele University - BA Music Technology, First Class (2013 – 2016)

Modules:

Developed a granular audio application for surround sound playback (C).

Recorded, mixed and mastered for live bands (Logic Pro X).

Prototyped performative sound design tools for musicians (Max, Pure Data).

Final Projects:

Created and presented a 16-minute portfolio of sound design, programming and audio-visual compositional projects to the public with live surround sound diffusion.

Researched and analysed a chronology of war films to publish a dissertation on the past, present and future of narrative sound design techniques.

HOBBIES

Language learning (Japanese), playing drums, field recording and writing sound design analysis.