Gregor McWilliam

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EDUCATION

NEW YORK UNIVERSITY, New York City, U.S.
Master's Degree in Music Technology, May 2022
Current GPA: 4.0
- Specializations in software development, digital signal processing, spatial audio, and deep learning
- Coursework includes Digital Signal Theory, Audio Coding, MIR, 3D Audio, and Advanced Acoustics
- Dr. Ilpo Martikainen Genelec Audio Visionary Scholarship, 2021-2022; Graduate Student Scholarship, 2020-2022

INSTITUTE OF CONTEMPORARY MUSIC PERFORMANCE, London, U.K.
Bachelor's Degree in Popular Music Performance, May 2011
Converted GPA: 3.56
- Delivered dissertation concerning prevalence of hyperreality in modern media
- Graduated among top 4% of class and received Best Vocalist award

PROFESSIONAL EXPERIENCE

AUDIO, ACOUSTICS, AND MACHINE LEARNING INTERN, *MediaTek USA Inc.,* San Jose, U.S., 2021
- Prototype and integrate state-of-the-art DSP and machine learning tools into the company's IoT devices via Yocto
- Develop real-time signal analysis applications for remote evaluation of multi-channel MEMS microphone arrays
- Advise on strategies and potential markets for the company's audio-related technologies

PROJECT MANAGER AND AUDIO ENGINEER, *Third Ear Meditation Ltd.,* London, U.K., 2017-2020
- Directed production and implementation of over 40 hours of unique audio content for the popular iOS and Android sound meditation app – twice Apple's "App of the Day"
- Integrated various technologies, such as binaural recording and spatial audio, to create an immersive, deeply engrossing auditory environment for the listener

MUSIC PRODUCER, *Self-employed,* London, U.K., 2011-2020
- Co-wrote, engineered, produced, and mixed over 800 projects for more than 100 artists across popular and classical genres, including Grammy and Latin Grammy Award nominees
- Developed major commercial productions for corporate clients such as Ford Motor Company

TECHNICAL PROJECTS

DSP TOOLBOX, *GitHub*, New York City, U.S., Fall 2020
- Collection of linear and non-linear real-time audio processing tools, available in **MATLAB** and **C++**
- Includes compressors, popular modulation effects, and reverbs computed both algorithmically and via convolution

IMMERSIVE VIDEOCONFERENCING APPLICATION, *New York University*, New York City, U.S., Spring 2021
- Browser-based **JavaScript** application that utilizes **WebRTC**, **Web Audio**, and **CMSHeadphoneMotionManager** APIs
- Spatializes audio via real-time HRTF convolution, rendering participants' voices within a virtual binaural environment

ONLINE PRICE TRACKER, *GitHub*, London, U.S., Spring 2020
- Designed **Python** application that automatically notifies user via email when item price falls below selected value
- Utilized **Selenium** and **Smtplib** libraries in the project's successful implementation

TECHNICAL SKILLS

LANGUAGES:
  Proficient: **C**, **C++** (including PortAudio, JUCE), **Python** (including Scikit-learn, PyQtGraph, Selenium), **MATLAB**
  Prior experience: **JavaScript** (Node.js, PeerJS, Web Audio), **SQL**
SOFTWARE: Unity, Logic Pro X, Pro Tools, Tableau
HARDWARE: Embedded systems, MEMS microphones, Yocto Project, SSL Duality console

AFFILIATIONS AND INTERESTS

STUDENT: Immersive Audio Group, Entrepreneurial Institute, Student Computer Technician
PROFESSIONAL: IEEE, AES (member and volunteer at Fall Convention 2020), ISMIR
INTERESTS: Software development, audio, machine learning, technology, entrepreneurship
HOBBIES: Reading, distance running, music production, coffee, weight training, rugby