SABIAN HIBBS

◉ Derbyshire, United Kingdom ✉ sabian.hibbs@gmail.com ☐ +4407742160262 ☁ sabianhibbs.net

SUMMARY

Co-Founder & CTO with 10+ years of experience specializing in AI, advanced audio processing, and large-scale system architecture. Proven ability to lead technical strategy and build innovative AI/ML systems addressing complex audio challenges (synthetic detection, copyright). Demonstrated expertise in practical, scalable implementation (e.g., EUCLID system). Aims to leverage deep technical skills to advance AI and audio technology.

EXPERIENCE

Co-Founder & Chief Technology Officer (CTO)
Uhmbrella Ltd.   **September 2023 – Present, Remote/Derbyshire, UK**
- Leading technical strategy and product development for a start-up focused on AI-driven audio detection and music copyright protection.
- Architecting and developing novel AI/ML systems, including the EUCLID multi-head binary classification system for distinguishing authentic and synthetic audio data, attribution and content management .
- Overseeing the integration of advanced audio processing techniques with machine learning models for high-accuracy detection.
- Defining the technology roadmap, managing development resources, and ensuring alignment with business objectives.

AR/VR Research Panel Member
Meta   **April 2024 – Present, Remote**
- Contribute expertise to AR/VR research initiatives, focusing on audio integration, spatial audio implementation, and user experience testing for immersive environments.
- Provide feedback on emerging technologies and participate in remote testing protocols.

Software Tool Developer
ThinkSpace Education Ltd   **February 2022 – April 2023, Remote**
- Developed a suite of in-house software tools to automate processes and improve productivity for educational content delivery.
- Key projects include:
- Automated Batch Video Processor (Python): Utilized API calls and AI models (NLP/Speech) to extract summaries, bullet points, improvement areas, questions, and context reviews from video lectures.
- Batch Video/Audio Speaker Diarization Tool (Python/CUDA): Implemented speech transcription, speaker detection, and word-level timestamping.
- Batch Video Editing Processor (Python): Automated the removal of silences in dialogue for streamlined video content.
- Apple Silicon Permission Classifier Rectifier (Shell): Resolved macOS quarantine and permission issues for downloaded educational software (Game/Audio Engines).
- File Corruption Detector: Developed a novel method for detecting packet loss during large AWS uploads via a temporary server.
- Novel Lossless/Lossy Audio Compressor (Python): Created an alternative audio compression algorithm comparable to FLAC, designed for reduced decoding overhead.

Game Audio Course Coordinator
ThinkSpace Education Ltd   **February 2022 – April 2023, Remote**
- Provided support for ongoing game development projects using Unity, Unreal Engine 4, and Wwise audio middleware.
- Created and delivered master's level course material via online webinars and assignments.
- Liaised with third-party contractors for course content and project requirements.
- Collaborated with the University of Chichester on the development of new course materials.

Assistant Lecturer – Audio Electronics & Mathematics
University of Derby   **October 2021 – September 2022, Derby, UK**
- Assisted senior lecturers in teaching undergraduate courses in Audio Electronics and Mathematics.
- Conducted seminars and workshops, providing technical support and guidance to Level 4 and Level 5 students.
- Fostered a supportive learning environment to aid student comprehension of complex technical concepts.

Audio Rigger (Technical Audio Designer)
Frontier Developments PLC   **May 2021 – August 2021, Cambridge, UK**
- Contributed to the optimization of audio systems for *Jurassic World Evolution 2* across multiple platforms (PC, PlayStation, Xbox).
- Acted as a bridge between sound designers and audio programmers, focusing on improving Wwise project implementation and efficiency.
- Gained hands-on Quality Assurance (QA) experience through extensive feature testing and iteration.
- Contributed to undisclosed NDA projects.

Lead Sound Designer
Dark Matter Games   **August 2020 – September 2021, Derbyshire, UK**
- Oversaw all aspects of audio design for multiple game projects.
- Managed sound effect creation, music integration, and voice-over recording and implementation processes.
- Designed and implemented game audio systems.

PROJECT

EUCLID: Multi-Head Binary Classification System
Uhmbrella Ltd.
· Architected a novel Al system for high-accuracy synthetic audio detection, detailed in an upcoming technical whitepaper.
· (Al Architecture, Audio Detection, Azure, PyTorch, CUDA).

NewGate Video Processor
· Developed a Python-based tool using computer vision and deep learning for automated video analysis and enhancement.
· (Python, Computer Vision, Deep Learning).

BatchLMT2
· Fine-tuned OpenAl's Whisper model for enhanced speech recognition accuracy, incorporating batch processing capabilities.
· (OPENAI Whisper, Speech Recognition, Python).

SpaceEchoVST3Plugin
· Created a professional-grade VST3 audio plugin simulating classic space echo effects using C++ and DSP techniques.
· (Audio, DSP, C++).

Motion Extraction Posy
· Built a tool using Python and computer vision to extract and analyse motion data from video streams.
· (Motion Analysis, Python, Computer Vision).

EDUCATION

Master of Science (MSc), Audio Engineering
University of Derby, UK · Derby, UK · 2021-2022
· Specialized in advanced audio processing techniques, system design, and research methodologies.

Bachelor of Science (BSc), Music Technology
Birmingham City University, UK · 2013-2017
· Focused on audio technology fundamentals, acoustics, electronics, and practical studio/live sound applications.

BTEC Level 3 Extended Diploma, Music Technology
Joseph Wright Centre, Derby College, UK · 2011-2013
· Foundation in audio engineering, production techniques, and music theory.

PUBLICATIONS

Multi-Head Binary Classification System for Synthetic Data Detection and Audio Authentication Systems (Technical Whitepaper)
Non Academic Publication - March 2025

Enhancing Speech Recognition and Accessibility in Panopto Videos: A Comparative Analysis of OPENAI's Whisper and Traditional Automatic Speech Recognition
Masters Thesis September 2023

Effects of Lossy Compression Codecs on the Perception of Immersive Audio in Virtual Reality Applications
Research Project - May 2023

SKILLS

System Design & Architecture, Deep Learning (TensorFlow/PyTorch), Speech Recognition (Whisper), Synthetic Data Detection, Natural Language Processing (NLP), Model Fine-Tuning, Parameter Optimisation, Vector Databases (FAISS/HNSWlib).

Digital Signal Processing (DSP), Audio Feature Extraction (Librosa), Psychoacoustics, Ambisonics, Spatial Audio, Binaural Encoding, Audio Compression (Lossy/Lossless), VST Plugin Development.

Wwise, FMOD, Unity Engine, Unreal Engine (UE4/UE5), Technical Audio Design, Audio Implementation, Optimization.

Python (Advanced), C++ (Intermediate), CUDA, Shell Scripting, Git, API Integration, System Design.

System Architecture, End-to-End Solution Design, Critical Thinking, Problem Solving, Technical Leadership, Research & Development, Project Management.