

Daniel Manz

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Introduction

Research-practitioner specialising in ML-based audio synthesis, instrument fabrication and human-AI interaction. Seeking to empower artists in a time of rapidly developing AI technology, leveraging unorthodox applications of generative models and user-centred design methodologies.

Education

MSc Computing and Creative Industry, Distinction, University of Arts London	Sept 2023 - Dec 2024
Embedding neural audio synthesis model onto standalone instrument for dissertation, exposing internal network architecture to the user. Executed full prototyping & development cycle including CAD, electronic circuit fabrication and conducting robust user-testing.	
BSc Physics and Computer Science, 2:1, University of Groningen, NL	Sept 2018 - Jun 2021
Dissertation focused on introduction of ML models for improved electron detection at the LHCb experiment, CERN. Executed cycle of ML development, including feature engineering, hyperparameter tuning and explainability.	
A - Levels, Bishop Vesey Sixth Form, Birmingham, UK	Sept 2016 - Aug 2018
Maths, German A* Physics A Further Maths B	

Experience

Associate Lecturer, UAL Creative Computing Institute	March 2025 - Present
<ul style="list-style-type: none">• Modules: (2024/2025) [MSc level-7] Exploring Machine Intelligence, (2025/2026) [MSc level-7] Coding for Robotics• Prepare and deliver lectures• Guide students through technical problem solving tutorials• Assess student work according to departmental standards	
ML Engineer, Pollen Audio, London	Dec 2024 - Present
<ul style="list-style-type: none">• Design and develop ML architecture tailored for audio processing tasks• Curating and managing high-quality datasets• Implementing full training cycle, adhering to MLOps• Dockerisation and deployment, integrating solutions into bespoke interface	
ML Engineer, University for the Creative Arts	March 2024 - Aug 2024
<ul style="list-style-type: none">• Design and develop ML architecture, creatively reimagining women's representation in advertising• Deploy and configure scalable image annotation system• Comprehensive analysis of foundational models for image generation, amplifying 'glitches'• Deploying model with custom interface, shaped by client's wishes	
Creative Developer, Pollen Audio, London	Jan 2024 - Sept 2024
<ul style="list-style-type: none">• Developed vehicle motion sonification system from PoC to production using Max/MSP & Python• Mapping real-time data to audio spatialisation parameters, using the ambisonic framework• Delivered client-ready demonstrations for automotive industry stakeholders• Engineered standalone executable application, implementing rapid prototyping methodology for hardware/software integration	
Creative Developer, Transforming Collections, London	Jun 2024 - Oct 2024
<ul style="list-style-type: none">• Working closely with artist Erika Tan, developed archival sonification schema in Pure Data displayed at the Museum X Machine X Me conference in the Blavatnik tanks, Tate Modern• Engineered ML audio synthesis model, real-time latent space exploration, integrating custom granular synthesis algorithm• Designed and deployed multi-channel speaker configuration for exhibition space	
Student Technician, UAL Creative Computing Institute	May 2024
<ul style="list-style-type: none">• Lead student technician for MSc Creative Computing (Modular) students for the senseScape exhibition, Eagle Wharf• Providing/installing projectors, sensors and speakers for student works• Real-time problem solving and managing student relationships & expectations	

Conference Proceedings

- **Daniel Manz**, Mick Grierson, *Brave: Designing an Embedded Network-Bending Instrument, Manifesting Output Diversity in Neural Audio Systems*. In Proceedings of the 16th International Conference on Computational Creativity (ICCC'25). Campinas, Brazil, July 2025.

Skills

Core Software Engineering	Python, JavaScript, C/C++ Version control methodologies, Git and collaborative workflows Data analysis and visualisation, using pandas, matplotlib & seaborn Cloud deployment & production systems
Machine Learning	Frameworks: PyTorch & libtorch C++ Cloud-based training and deployment Embedding model on stand-alone device Configure and deploy scalable data annotation systems
Audio Programming & DSP	Interaction design in Max/MSP & Pure Data AI music models: diffusion, VAEs, transformer-based architectures Spatial audio programming Audio analysis: Librosa, Essentia Production tools: Ableton, Reaper
Physical Computing & HCI	Arduino-based interaction design with sensor integration Electronic circuit fabrication: breadboarding, soldering & PCB manufacture CAD design in Fusion 360 & 3D printing
Languages	Fluent in both English & German Proficient in Dutch