Alex Williams

Contact: alexander.j.williams@qmul.ac.uk
LinkedIn: linkedin.com/in/alex-j-williams/
Website: alexjameswilliams.github.io/
Orcid: orcid.org/0000-0003-2387-6876

I am an academic researcher with multi-disciplinary experience in areas of computer science, engineering and music technology. I am passionate about scientific research, technology and their impact and intersection with areas such as sustainability, politics, music, art and culture. My research interests include AI / reinforcement learning, computational creativity, music information retrieval, human-computer interaction, robotics, Industry 4.0, and electronic music.

Education

PhD. Artificial Intelligence and Music **2022 – Present**
Queen Mary University of London, in collaboration with Sony CSL

MSc. by Research, Artificial Intelligence and Robotics **2018 – 2021**
Swansea University

BSc. Hons. Computer Science: First Class, **2015 – 2018**
University of Liverpool

Employment

Chief AI Officer – *Mariposa AI* **2024**
Research Assistant – *ASTUTE, Swansea University* **2018 – 2023**
Junior Developer – *Malinko* **2018**

Skills

Languages: English (Native), French (Intermediate), Welsh (Intermediate)

Music: Self-taught electronic music producer and DJ of 13 years composing, producing, and mixing; releasing original music, sound design for games and visual media, and radio shows / DJ mixes

Published Works

Williams et al., ***'Deep Learning-based Audio Representations for the Analysis and Visualisation of Electronic Dance Music DJ Mixes'***, AES International Symposium on AI and the Musician, 2024

Williams et al., ***'Sound-and-Image-Informed Music Artwork Generation Using Text-to-Image Models'*** *at the Music Recommender Systems Workshop at RecSys, 2023*

Williams et al., ***'User Driven Music Generation in Digital Audio Workstations'*** (*poster*), DMRN+17, 2022

Matallah et al., **'A Deep Reinforcement Learning Approach to BEV Powertrain Optimisation'**, KES SDM, 2022

Williams, ***'Real-Time Visual Servoing of a Redundant Manipulator via Deep Reinforcement Learning'***; Master's Thesis; Swansea University, 2021

Williams et al., **'Survey of Energy Harvesting Technologies for Wireless Sensor Networks'**, IEEE Access, 2021

Torquato et al., '***Cascade Optimisation of Battery Electric Vehicle Powertrains'***, KES, 2021