Huw Cheston

🌐 Website: https://huwcheston.github.io/

 GitHub: https://github.com/huwcheston

📖 Location: London, UK

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Experience

Research Scientist Intern (Audio Intelligence)
June – August 2024

Spotify
London, UK

- Developed end-to-end deep learning model for identifying copyrighted samples in catalogue audio recordings, **driving downstream product applications** in music content categorisation & plagiarism detection
- Results **outperformed competing system ("Shazam") by 9x**, improved upon internal model by **13%**
- Managed pipelines for generating artificial training data at **petabyte-scale** using Google Cloud & Apache Beam
- Deployed training runs on distributed GPU clusters using Ray & Kubernetes
- **Presented results** to senior company stakeholders and in a scientific paper [accessible at arXiv:2502.06364]

Music Computing Lecturer + Supervisor
2021 – 2024

University of Cambridge
Cambridge, UK

- Delivered **100+** undergraduate supervisions and lectures on modelling and visualisation of audio data
- **Managed** 4 undergraduate students on music-related data science and machine learning projects

Data Science Instructor
2023

Sutton Trust
Cambridge, UK

- Delivered workshops on music + data science for secondary-age students from state-educated backgrounds
- Designed interactive coding and statistics exercises on Google Colab, hosted on GitHub Pages

Teaching Assistant
2020 – 2021

Kingswood School
Bath, UK

- Planned & taught music technology lessons, both in-classroom and virtually during COVID
- Managed recording studio and music technology suite, produced promotional audio-visual material for the school

Professional Musician
2016 – 2020

Freelance
UK

- Worked with internationally recognised acts including *Clean Bandit, Everything Everything, Dinosaur*

Education

University of Cambridge
2021 – 2025

Ph.D, Music Computing
Cambridge, UK

- **Thesis title**: Computational Modelling of Jazz Improvisation
- **Advanced state-of-the-art** in music computing tasks including automatic performer identification
- Published **3 peer-reviewed** papers in major (top-20) scientific journals
- Fully-funded with £75k competitive research grant from Cambridge Trust
- **Service:** peer review for *Transactions of the International Society of Music Information Retrieval, Music & Science* journals

University of Oxford
2016 – 2020

BA + MSt., Music Psychology
Oxford, UK

- Graduated with **highest mark in year**, 85% average
- Fully-funded masters study with £25k research grant from Linacre College, Oxford

Skills

Stats: multi-level modelling, NHST workflows, time-series analysis, experiment design, optimisation
Inference: simulation, AB testing, hypothesis testing, bootstrapping, causal inference, dimensionality reduction,
Machine Learning: explainability, model selection, artificial datasets, language modelling, neural networks, big data
Languages: Python, JavaScript, HTML/CSS, R, SQL
Tools: Git, Unix, LaTeX, Google Cloud Platform, Apache Beam, Docker, Ray
Libraries: pandas, matplotlib, plotly, scipy, scikit-learn, pytorch, statsmodels, numpy, librosa, ggplot2, captum
Domain Knowledge: music categorisation, classification, & retrieval, audio signal processing, explainable AI

Selected Publications

Journal Articles

Preprints

Conference Proceedings

References Available on Request