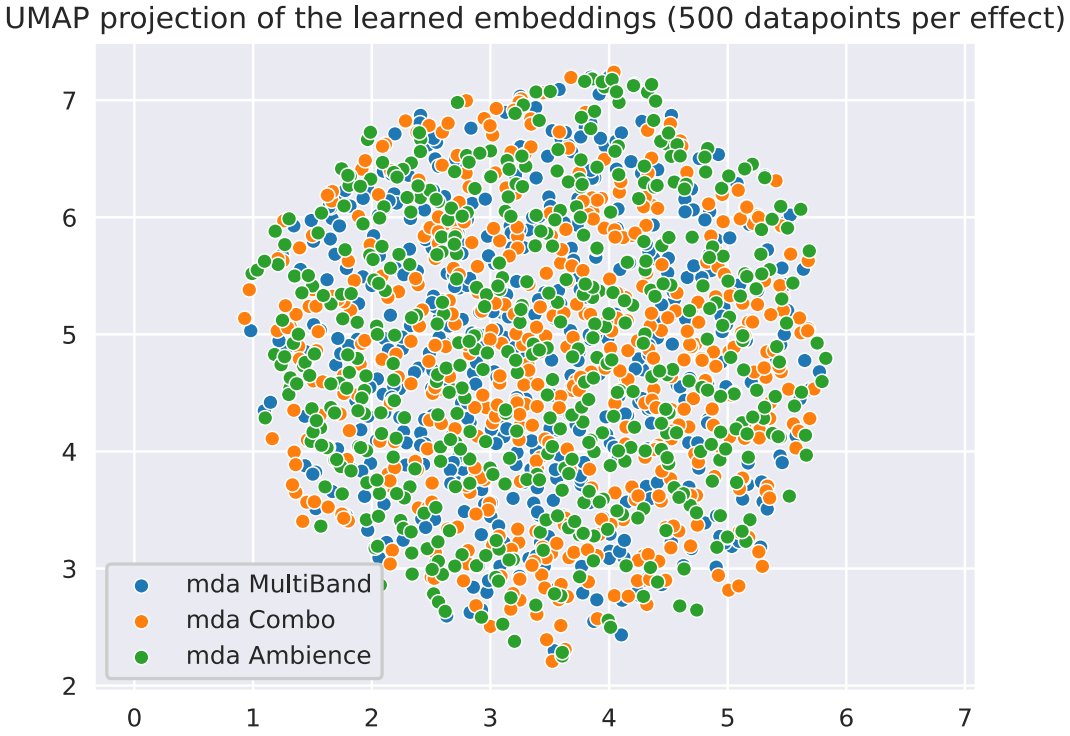
Week 2 Meeting

2357351G - MSci Half Project

What I've done this week

- Updated VAE training to use multiple DAFX.
- Implemented early stopping and checkpointing for model training.
- Ran full model training on the VAE.
- Created a notebook for analysis of the learned latent space.
- Read (but not summarised) *Bridging Audio Analysis, Perception and Synthesis with Perceptually-Regulated Variational Timbre Spaces (2018).*

Projection of data in learned latent space



Questions

- Should I be concerned that training converged so quickly? Obviously this is just the VAE part of the system, and not end-to-end style matching, but it seemed to learn a reasonable latent space (according to the loss function) within a few epochs.
- I'll be using UMAP to reduce the dimensionality of the 64D latent space to a 2-8D latent space. Should I normalise the low-dimensional projection before feeding it in to the parameter controller neural network?

Plan for next week

- Implement the end-to-end system including correct losses.
- Create a plan for model evaluation.
- More analysis on VAE latent space (*brightness* and *depth* features).
- Create LaTeX document for final report and start transferring over relevant sections from interim report.

Where I am in schedule

- VAE training seems to have gone better than I expected.
- Still need to implement the end-to-end system.
- Need a plan for style-transfer evaluation.
- Would be good to start writing the final paper soon.