Dream Structures

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Additional Key Words and Phrases: live coding, machine learning, music information retrieval, trance, electronic

ACM Reference Format:
Daniel Jones. 2023. Dream Structures. 1, 1 (May 2023), 1 page.

1 PROGRAM NOTES

Dream Structures is a live coding performance that uses computational audio analysis and machine learning to navigate and resample a half-terabyte archive of 90s/00s trance music, creating a live musical collage that organises fragments of audio from thousands of tracks by traversing a multidimensional feature space.

The system automatically mines this archive for sounds of certain categories commonly found within early trance and rave – animal sounds, speech, sirens, atmospheric noise – and uses them to generate both ambient textural and rhythmic sequences, using generative patterns that are developed on-the-fly in code.

This is augmented by arpeggiated layers and pads using novel software emulations of iconic digital synthesizers including the Roland JP-8000 Super Saw, Akai MPC timestretch, DX7 FM synth.

Dream Structures is performed with SignalFlow, a free and open-source Python library for sound synthesis that the author has been developing over the past decade, using Jupyter notebooks as a real-time IDE. All of the synthesis algorithms described are provided for free with the distribution.

2 PERFORMANCE NOTES

- **Duration**: 10-15 minutes.
- **Requirements**: HD projector and stereo audio input, ideally performed after dark in a club environment.

3 MEDIA LINKS

- Short video here from a recent performance at *10 Years of Algorave* (Corsica Studios, London, UK): https://www.dropbox.com/s/actyzfee7q3w3k4/IMG_4406.MOV?dl=0

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Music Proceedings of the International Conference on New Interfaces for Musical Expression
NIME'23, 31 May–2 June, 2023, Mexico City, Mexico