

THE FUTURE IS NOW DATA SCIENCE & POPULAR MUSIC CURRICULUM SUPPORT RESOURCES PACK Exclusive to Musicid Perpetual Licence Subscribers

THE FUTURE IS NOW DATA SCIENCE & POPULAR MUSIC.

MusicID is proud to present our first curriculum support resource: The Future is Now – Data Science & Popular Music. This series of modules, developed by Popular Music Studies researcher Dr. Craig Hamilton, is designed to support the introduction and further implementation of data science and its methodologies into musicology and music industry courses.

An understanding and confidence in data research and data storytelling are essential skills that help your students throughout their academic and post-graduate careers.

This series of 8 flexible modules may be deployed in ways that benefit your programme and students. Whether delivered as a standalone element, or combined into a one-day, weekend, one-week, full-semester course, or even used to inform the delivery of a degree programme. The learning outcomes of each section remain the same. What expands is the level of detail and technical complexity involved in delivery.

These courses will benefit a variety of educators and practitioners, including HEI, FE and private course providers; Music Industries (and Creative Industries) students; digital humanities scholars; and more.

MusicID's The Future is Now Data Science & Popular Music Curriculum Support Resources

Teaching materials

Study and planning resources

Raw datasets used to illustrate data structures

Tutorials and guides

Each of the 8 sections includes

- ✓ Basic overview
- Learning outcomes
- Key points for each session/section
- MusicID resources
- Suggested exercise and discussion points
- Recommended assignments and tasks

The modules are flexible and may be scaled up or down from individual one-day seminars to full-semester courses.

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MusicID's The Future is Now Data Science & Popular Music Modules

Part 1: What is Data?

In this element students will be introduced to basic concepts around data, how and why it is used, and how this relates to the music industries.

By the end of this section, students will be able to demonstrate:

 \checkmark An understanding of what data is, how it is used, and why

An understanding of how data is used in a music industries context, which companies are involved, and why data is now so key to the industry.

Part 2: Historical Context

In this element, students will be introduced to the idea that data is far from new, and that its central role in contemporary society is part of a much longer arc. They will discover how data has been important throughout history, how numbers surround us, and how data is closely linked to power dynamics, economics and even our social lives. They will learn this through examining how data manifests in the music industries.

By the end of this section, students will be able to demonstrate:

An understanding of how data has been generated and used over time

An understanding of how different data types have been important in the music industries over time

Part 3: Contemporary Landscape

In this element, students will be introduced to the developments of the last 25 years and how the music industries became data-driven. The historical overview in the previous section will enable them to understand developments such as Spotify as part of a longer trajectory, but – equally – they will also understand how data has now become central and why understanding its role and use is essential.

By the end of this section, students will be able to demonstrate:

- An understanding of the key players in the data-driven music space and how these organisations interact with incumbent players
- An understanding of the new and existing types of data that are generated and used, and why they are important

Part 4: Data and the Value Chain

In this element, students will be introduced to the various elements of the music industries (economic) value chain, and how data both reflects and drives this.

By the end of this section, students will be able to demonstrate:

 An understanding of the different types of revenue generated through the music industries (recorded, publishing, mechanical, performance, etc.)

An understanding of which services (and data types) relate to this

An understanding of the importance of creating and maintaining data

Part 5: Data Generation, Collection and Management

In this section, students will learn about how to create, collect and manage datasets. Key to data analysis and visualisation (next section) is that data is organised in a way that makes it ready for analysis. This section will provide a rationale and set of skills that will enable students to work with data

By the end of this section, students will be able to demonstrate:

- An understanding of how to generate their own data sets (via surveys, web-scraping, etc.)
- An understanding of how to organise data to make it ready for analysis (e.g. cleaning, wrangling, etc.)
- An understanding of the legal / ethical / ownership issues surrounding data use

Part 6: Data Analysis and Visualisation

Building on the previous section, this element will enable students to perform computational and statistical analyses of data and then visualise results.

By the end of this section, students will be able to demonstrate:

An understanding of some of the key techniques involved in analysing different types of data (e.g. numeric, text, etc.)

- An understanding of how to visualise data for exploratory analyses and or the narration of results
- An understanding of how data analysis and visualisation can be deployed as part of an argument/case



Part 7: Data Tools and Processes

In this section, students will discover how to apply their new skills in data collection, analysis and visualisation to common processes or regular tasks.

By the end of this section, students will be able to demonstrate:

- An understanding how data collection/analysis techniques can be applied to regular and/or mundane tasks.
 - An understanding of how data workflows can be created and automated

An understanding of how to build basic interfaces and tools.

Part 8: Data Products and Innovation

To close the course, in this element students will be encouraged to apply the conceptual and practical tools they have developed to date to their ideas for new data-derived products and services.

By the end of this section, students will be able to demonstrate:

An understanding of how to develop and articulate an idea for a new product/service

An understanding of how to design and plan a project to develop their idea



Craig Hamilton is a Research Fellow in the School of Media at Birmingham City University. His research explores contemporary popular music reception practices and the role of digital, data and Internet technologies on the business and cultural environments of music consumption. This research is built around the development of The Harkive Project (www.harkive.org), an online, crowd-sourced method of generating data from music consumers about their everyday relationships with music and technology. Craig is also the co-Managing Editor of Riffs: Experimental Research on Popular Music.

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