**Information Services**

2. To which music is the world listening?

We have developed the web application Streamwatchr, that monitors Twitter to find out to which music people are listening. Streamwatchr offers real-time insights into music listening behaviour around the world.

Using the button 'Now', we show the stream of plays coming in. It can be great to discover and listen to some unknown bands that others are listening to. Using the button 'Hot', we show a real-time chart, based on the current popularity of songs and artists. Finally, using the button 'Unexpected', we try to find songs and artists that could be booming soon. Streamwatchr's engine for interpreting music listening behaviour on Twitter uses YouTube, Musicbrainz, last.fm, lyricsNmusic for mapping and analyzing an incoming stream of tweets: six tweets per second, five hundred thousand tweets per day.
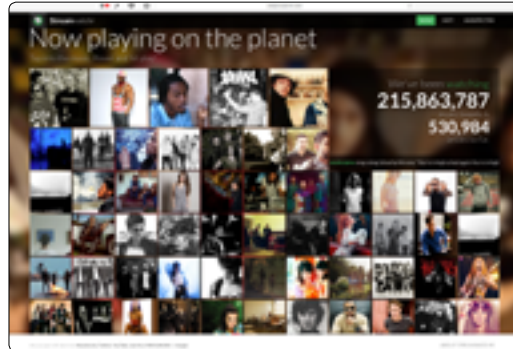
ICT science question

The core scientific challenge that Streamwatchr addresses is how to interpret highly dynamic user-generated texts. Streamwatchr maps the content of text messages to a knowledge base in real-time.

Application

Streamwatchr is a consumer-oriented web application based on tweets about music. The interface shows the music that is being played and listened to around the world in real-time via flipping tiles. By clicking a tile, users can play songs via Youtube and find related songs via *Streamwatchr*'s recommender system. Users can also see what people are singing along to now, or which parts of the lyrics are most popular for a song. *Streamwatchr*'s private partners are 904Labs and Eagerly Internet. Due to the highly competitive arena in consumer-oriented music discovery (e.g., iTunes, Spotify, Milk), *Streamwatchr* will use its backbone technology for developing business-to-business products different from the consumer-oriented web application. A non-profit partner can be Musicbrainz for using *Streamwatchr*'s song and artist popularity signals. A commercial partner can be Spotify, which can extend their signals with those from Twitter using *Streamwatchr*'s technology. For these applications, the core technology is in place but APIs for broadcasting the data are still to be developed.

Alternative Application

Unstructured text analysis is broadly applicable. The technology behind Streamwatchr can be applied to analyze behavioural patterns around other consumer-oriented products, like movies, tv shows, food, or wish lists to name a few. Our technology allows for generating real-time popularity charts, detecting anomalies as early signals of the next music hit, and radio functionality via a recommender system that is updated in real-time with every single tweet.

Nice to know

People around the globe report about their music listening behaviour, in half a million tweets. Every day. Streamwatchr encounters between two hundred and three hundred new bands per day. Every day. For its semantic interpretation engine, Streamwatchr fires two hundred million queries per month. Every month.

Streamwatchr's technology transforms the content from social media into meaningful signals. Streamwatchr has been selected as one of 12 projects that got funding for SXSW, the major event for music industry, and attracted very positive feedback.

The technology behind Streamwatchr adds a layer of intelligence in products that work on behavioral signals. Potential appications include online reputation management, discovery and predictive applications, and recommender systems.

Activities shared online is a powerful but hard-to-capture signal due to their high volume and their unstructured nature. Streamwatchr marks the first step beyond tedious manual annotation of these data by capturing their essence automatically.

To understand the world as it happens, our technology the mapping of unedited text to knowledge bases to see patterns in human behavior. Entity recognition and disambiguation is particularly challenging for songs and artists in the long-tail.

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