Grangemouth in Social Media

A summary of examples of tweets and Facebook posts

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GRANGEMOUTH AS PLANT AND TOWN

When looking at the mentions of Grangemouth in social media, it is important to mention that Grangemouth has a certain amount of ambiguity in its name. It usually refers to the Grangemouth town and area around it, as well as the chemical plant, the refinery, the port, and the landfill. This ambiguity makes the amount of posts and tweets mentioning the name Grangemouth larger and makes it necessary to use additional filters when finding specific information about the plant.

For example, the search combination "Grangemouth + accident" might result in posts about an accident on the chemical plant as well as a traffic accident around the town.

A lot of users complain about the smell, and it seems that some of it is from the landfill, some of it is the fish smell from the port, some of it comes from the chemical plant, and people do not always know its source.

FACEBOOK

Two social networks have been looked at in an attempt to understand the public sentiment towards the Grangemouth chemical plant: Facebook and Twitter. In both cases the search is only possible through public posts.

On Facebook, the search for public posts is available via the keyword search of a format "Posts about …". For example, "posts about Grangemouth" will return all the

posts about Grangemouth and posts made in Grangemouth (they might not be about the place itself). Quick basic search for keywords like "Grangemouth smell" and "Grangemouth accident" gives some posts like the following one:

However, there are also a lot of posts that are not directly relevant to the environmental situation around the chemical plant. For example, the following one:

Facebook for Developers offers a tool called the Graph API which allows searching through data for analysis purposes. It can be used on later stages of the project to extract the data.

TWITTER

Overall, Twitter seems to provide more data, and a bigger part of it is directly relevant to the environmental concerns. Searching for keywords "Grangemouth smell", Facebook returned around 60 results (these are all results including the irrelevant

ones), whereas Twitter provides around 100, and more of them seem relevant.

These are some of the relevant tweets about Grangemouth expressing concern or unhappiness with environmental aspects:

Tim Hood
@thehoodedhack

Follow

We're five miles from Grangemouth refinery and chemical plant. Every now and then we hear a deep bass rumbling...I'm assured this is regular

11:46 PM · 3 Jan 2011 from West Lothian, Scotland

Paul Hornsey
@MadDogNinja

Follow

@ScottishEPA On cold days&nights it's common for a petrol like smell to linger in Bo'ness from Grangemouth refinery. Why is this allowed?

1:07 AM · 23 Nov 2016

Anny Deery
@adeery

Follow

Weird fog crossing the forth river near Grangemouth. Anyone know what the cause is? Is it from Grangemouth?

RETWEET
1

10:01 PM · 22 Apr 2011

However, the detection of such tweets is complicated by the fact that not all the tweets can be filtered by a simple keyword filter. For example, a considerable amount of tweets uses irony and jokes, such as this conversation:

2

bazzargh @bazzargh · 16 Jan 2016
@cowspassage I'm sure I remember him in the background when Falkirk brought out their new keeper

Jim Speakman
@cowspassage

Follow

@bazzargh I have no idea what that picture is, but those Grangemouth chemical works have even more to blame for than I'd previously thought!

12:32 AM · 16 Jan 2016 from Glasgow, Scotland

As mentioned earlier, people use the name Grangemouth to describe several concepts, not just the refinery. As a result, some search results are not relevant and may describe smells coming from the port or the landfill:

Claudia Anderson
@claudiaa_xxx_

Follow

Why does Grangemouth smell like the sea😷😷😷

LIKES
5

11:32 AM · 20 Jul 2016

Or some other smells unrelated to the refinery:

When searching for "Grangemouth leak" keywords, some tweets refer to the email leak in February 2014, and some - to the fuel leak on a highway near Grangemouth in November 2013. However, it is interesting to note that the refinery leak on September 30th, 2014 was first reported by a woman, before it was reported by the media (it is unknown, however, where she received the information from):

STV News ✔ @STVNews · 30 Sep 2014
Gas **leak** at **Grangemouth** Ineos oil refinery sparks major emergency alert.
bit.ly/1pnLBrq

↩ 2   ♻ 16   ♥ 3

Mark Casey @issangels · 30 Sep 2014
@falkirk_herald @STVKaren reports of gas **leak** and fire at **Grangemouth** ref

↩   ♻   ♥

Mark Casey @issangels · 30 Sep 2014
Reports of gas **leak** and fire at **Grangemouth** refinery

↩   ♻   ♥

Jamie Devlin @jamiedevlin74 · 30 Sep 2014
@scotgp hi Guys, just to keep you in the loop. Major incident in **Grangemouth**.
Suspected gas **leak**. Staff stood down.

↩ 2   ♻ 6   ♥

christine @christinem70 · 30 Sep 2014
any info on Gas **leak** incident at **grangemouth** anyone??

↩ 2   ♻   ♥

The Falkirk Herald ✔ @falkirk_herald · 26 Feb 2014
Grangemouth properties left without gas supply as workmen search for the
source of a **leak**: falkirkherald.co.uk/news/local-new…

CONCLUSION

Overall, there are several facts that were discovered with a simple search:

1. users refer to the chemical plant and refinery by Grangemouth, and mostly complain about the smell, although separate rare posts talk about unexplained rumbling, fog and clouds.
2. the complaints are regular but do not seem to come from a lot of people at the same time.
3. people do not know if the smells come from the port, the landfill or the refinery
4. Twitter provides more relevant data than Facebook, but both can be used

The simplest solution would be for someone to reply to these tweets, however, in that

case, the filtering of the tweets about Grangemouth would have to be manual.

Alternatively, filtering can be automated using Natural Language Processing techniques. This is possible, however, it is quite complicated to do because it is hard to extract the meaning from the tweets that have irony and contain words that have several meanings.

When the filtering is done, it is up to the company to decide whether they want to reply to these posts and tweets or whether certain actions have to be performed, such as additional checks.