

# Suggesting your Business partner / Competitor

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Dataset: List of Farmers Market Traders

# Problem

“How to identify how strong or weak the relationship of two or more companies are.”

Depending of the results, companies can decide think about possible joint venture or a new marketing strategy in case they found they are competitors.

- Establish business relationships
- Find possible business partners
- Expand market
- Identify possible business competitors
- Find similarities in terms of the business aim
- The analysis is executed periodically, so the reports can present up-to-date information.

# Extensions

We are not sure if this idea is already implemented or whether the service is available, but we could not find any one similar in Dundee.


Compare the content of Dundee business information with others in UK or the world to identify opportunities.

Search for all possible information regarding a company, and compare with all content of companies that belong to an specific area to identify business opportunities and help to decide marketing strategies.



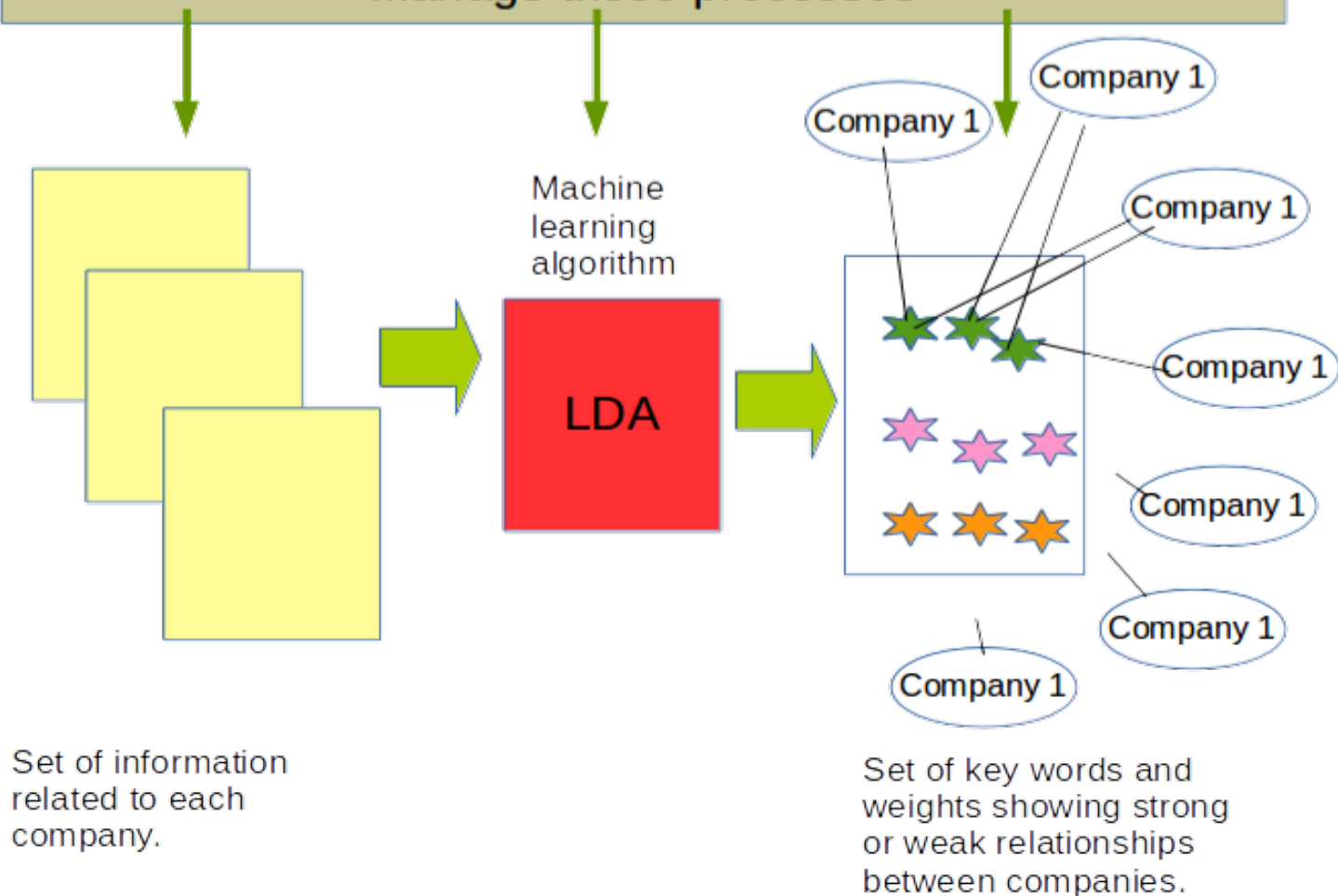
# Prototype

## NOTE:

- We are not ML experts and this is the first time we are using ML to help business companies and market traders to improve their business strategies.
  - This is not a final product, and it is a prototype but more like an initial idea.
  - Dataset used was the Dundee Market Traders.
  - Feed this data to a Latent Dirichlet Allocation Algorithm to model topics based on description of each business.
  - We used Python for ML and shell scripting for automation, output: CSV.
  - plotting the results output into a map builder online periodically updated.
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# Our Implementation

## Manage these processes



# Results

- We used the information available in the dataset to make the initial analysis.
- We found that base of the description in the dataset, the companies in Yellow (Next slide) perhaps have some strong relationship and their managers may think about start a more deep analysis on this future partners or competitors.



A

Dundee Farmers & Market Traders	Description of product
Puddledub	Farm produced pork, bacon, sausages, pies, and <u>charcuterie</u> .
Brewsters	Free range eggs, chicken, honey, smoked products.
Wild Hearth Bakery	Range of speciality breads including white <u>sourdough</u> , Yorkshire whole-wheat, m
Hubertus Game	Wild shot venison and small game.
Eden Mill	The sale and sampling of gin, gin liqueurs, gin cocktails, beers, whisky, glassware
Paper & Jam	<u>Homemade Preserves</u> : Pink Grapefruit & Lime Marmalade, Red Pepper & Chilli J
Highland Drovers	Highland beef, <u>Hebridean Lamb</u> .
Berit Thomson Pewterware	Handmade <u>pewterware</u> .
Dundee Cheesecakes	Baked New York Style Cheesecakes.
Cairn O'Keh	Fruit wines, bottled ciders, award winning sparkling elderflower and elderberry n
Arbroath Fisheries	Fresh and smoked fish, shellfish, fish cakes, seafood, fish soup, pies and quiches
Rockin Robins Bakery	Gluten free vegan cupcakes and cookies, make your own cookie jars, and other s
Redcastle Brewery	Bespoke ales, gin and rums.
Devenick Dairy	Cheese, veal, pork, cheesecake.
Allan & Chilli Products	Jars of award winning <u>homemade chilli jellies</u> and bottles of award winning sauce
John Reid & Sons	Fresh fruit and vegetables, honey, eggs, jam.
Inverness Fudge	Assortment of confectionery including chocolates, liquorice, fudge, tablet and toffe
Planet Soap	Soaps, candles, bath bombs and accessories & all hand made.

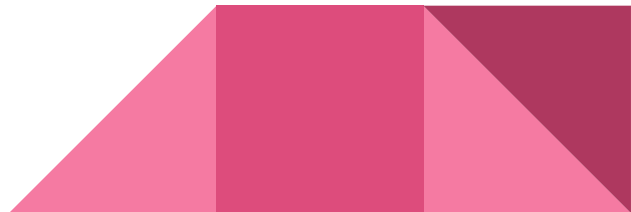
# More in depth attempt

- We extract the text information from listed companies websites and try to repeat the analysis.
- We could not find any meaningful insight to re-confirm or refuse the claims we had using the dataset description of the companies. Below one example of the 1000 iterations we tried, however there is not a clear relationship.
- Our hypothesis is that our tools required enhancement in two main tasks: filter out information that is not related to the company, and write a script that could help us to find a suitable number of iterations.

(0, u'0.036\*"\xb7" + 0.015\*"image" + 0.010\*"may"),

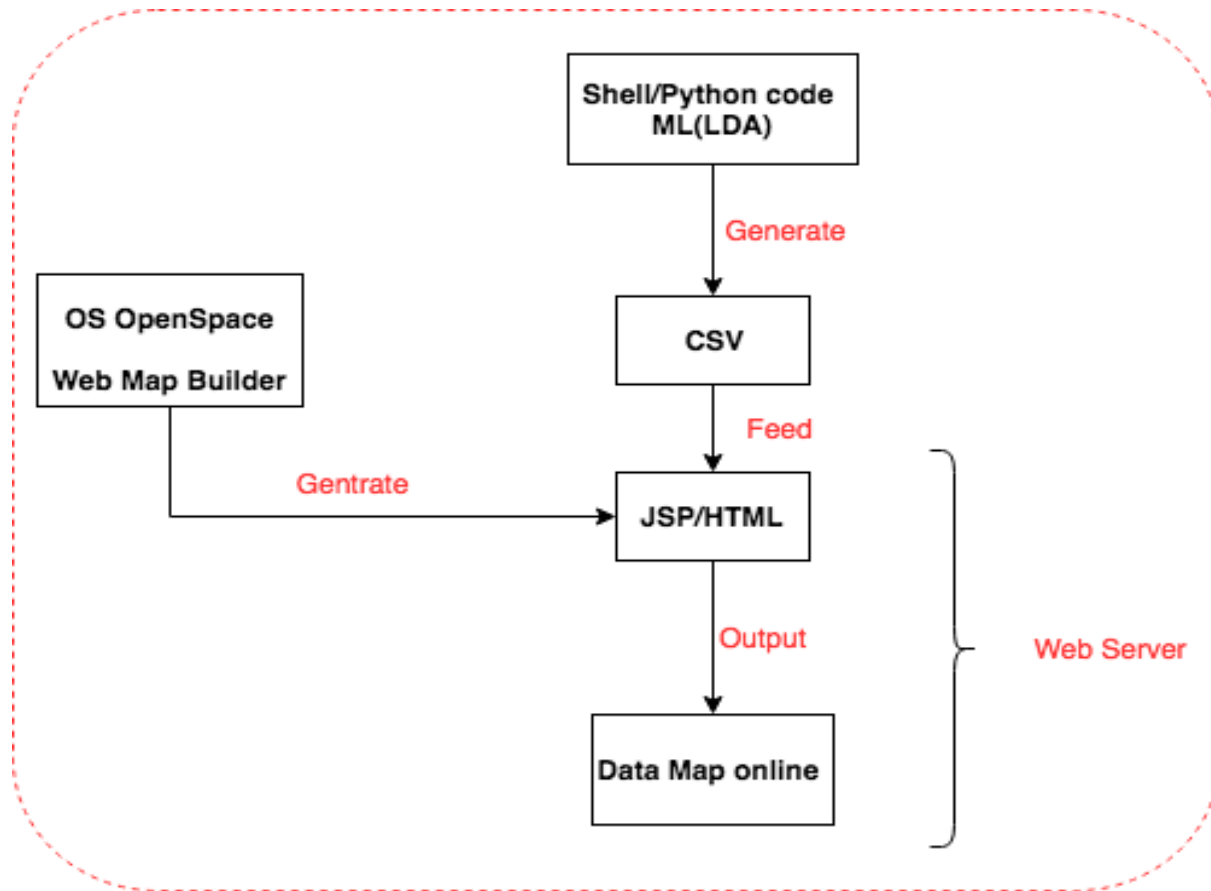
(1, u'0.036\*"\xb7" + 0.013\*"market" + 0.012\*"image"),

(2, u'0.013\*"soap" + 0.009\*"saturday" + 0.008\*"puddledub")





# Data mapping



# Future work

- Automate and enhance cleaning and corpus preprocessing, through out LDA aiming for a robust results.
- Define strategy to find a conclusion based on a weight of how strong the relation of two or more business are.

