

Open Food Facts Database Explorer

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Outline

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Introduction

1. Open Food Facts database is about food products
2. We used the sub set of the database which is provided by the professor
 - a. 2877 unique product category
 - b. 179,448 unique product
 - c. 78 columns for every product
3. We have developed and tested our tool using the subset

Challenges

1. Having a big database is the main challenge
 - a. DOM is not good to manage large number of objects
 - b. We have developed some techniques to overcome the shortcomings of the DOM model
2. We need to understand DOM and JS to prepare good visualizations with D3.js
 - a. What happens when you add a lot of object to DOM

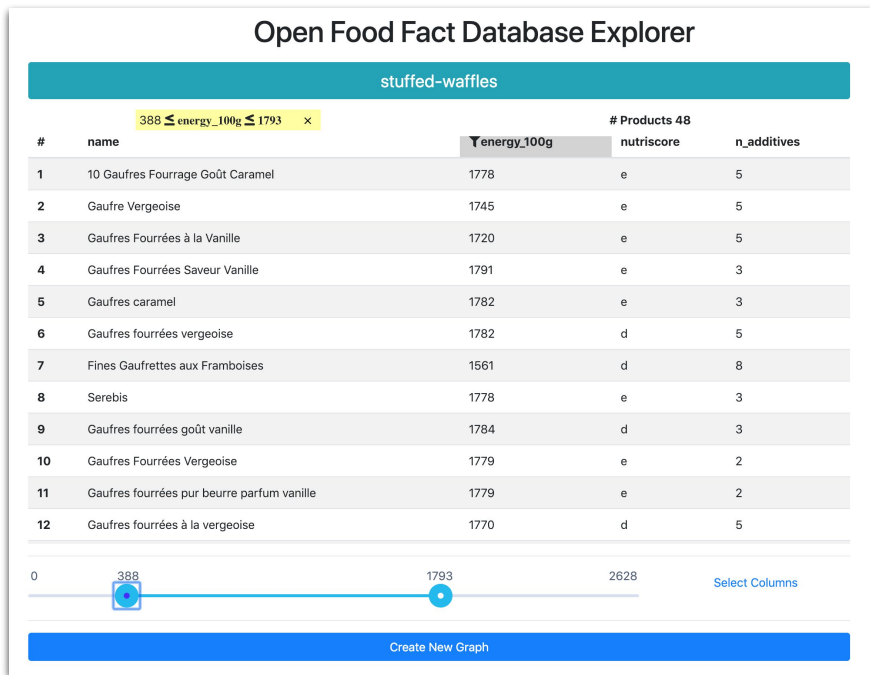
Goal of the visualization

Open Food Fact Database Explorer is a database browser to:

- find and edit outliers
- explore the database
- explore the relationships using advanced visualization techniques
- help understanding of the qualitative and quantitative features of the database

A general purpose utility for the users of the Open Fact Database.

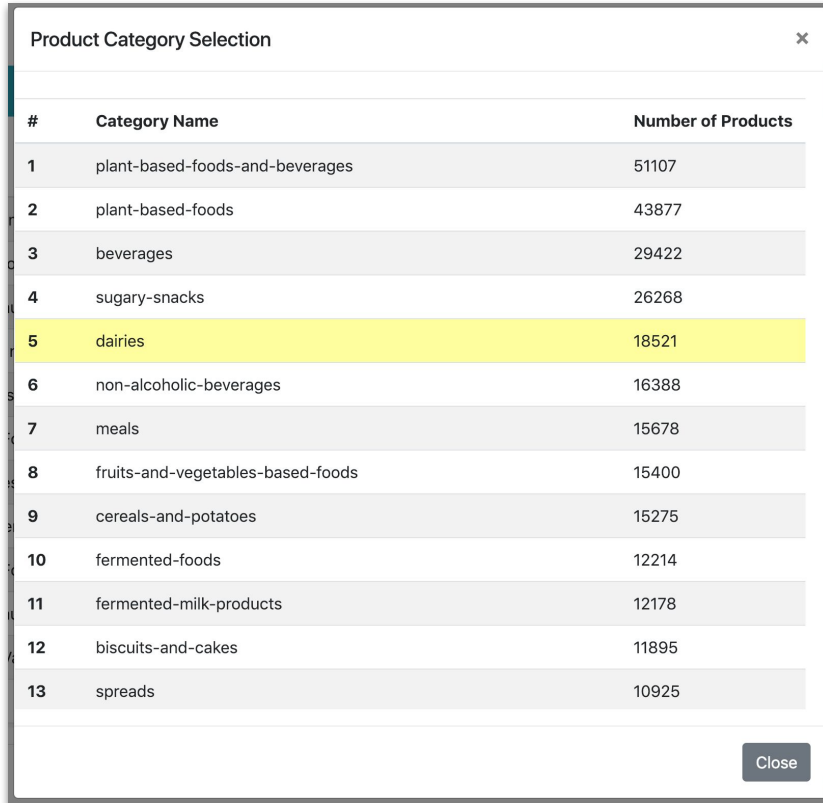
Features of the tool and visualizations



Features of the tool and visualizations

Advanced product category listing mechanism

- Categories are ordered by product count



The screenshot shows a 'Product Category Selection' window with a table of 13 categories. The categories are ordered by their product count in descending order. The 'dairies' category is highlighted in yellow. A 'Close' button is located at the bottom right of the window.

#	Category Name	Number of Products
1	plant-based-foods-and-beverages	51107
2	plant-based-foods	43877
3	beverages	29422
4	sugary-snacks	26268
5	dairies	18521
6	non-alcoholic-beverages	16388
7	meals	15678
8	fruits-and-vegetables-based-foods	15400
9	cereals-and-potatoes	15275
10	fermented-foods	12214
11	fermented-milk-products	12178
12	biscuits-and-cakes	11895
13	spreads	10925

Features of the tool and visualizations

Product Data Column Selection

#	Column Name	Selected	Availability
1	code	<input type="checkbox"/>	136
2	name	<input checked="" type="checkbox"/>	136
3	energy_100g	<input checked="" type="checkbox"/>	130
4	fat_100g	<input type="checkbox"/>	130
5	carbohydrates_100g	<input type="checkbox"/>	130
6	proteins_100g	<input type="checkbox"/>	130
7	nutriscore	<input checked="" type="checkbox"/>	125
8	saturated-fat_100g	<input type="checkbox"/>	125
9	sugars_100g	<input type="checkbox"/>	125
10	nutrition-score-fr_100g	<input type="checkbox"/>	125
11	nutrition-score-uk_100g	<input type="checkbox"/>	125
12	salt_100g	<input type="checkbox"/>	123
13	sodium_100g	<input type="checkbox"/>	123

Close

Column selection feature to remove the visual clutter

- Selected columns will be available on the table
- Column list is ordered according to availability of products

Features of the tool and visualizations

Open Food Fact Database Explorer

potato-crisps

Products 1393

#	name	energy_100g
1	Cornish Cruncher Cheddar & Pickled Onion Hand Cooked	2054
2	Winter Berries & Prosecco Hand cooked crisps	2192
3	Original Kettle Style Potato Chips	2090
4	Hand Cooked Potato Chips	2126
5	Hand Cooked Potato Chips Mature Cheddar & Caramelized Onion	2095
6	Original Sweet Potato Chips	2240
7	Stax® Original	2240
8	Kettle Cooked Sea Salt & Cracked Pepper	2240
9	Classic	2310
10	Lay's Classic	2390
11	Wavy original	2690
12	Jimmy Chips - BBQ Flavored	2240



Create New Graph

Product Data Column Selection

#	Column Name	Selected	Availability
1	code	<input type="checkbox"/>	1393
2	name	<input checked="" type="checkbox"/>	1388
3	energy_100g	<input checked="" type="checkbox"/>	1338
4	proteins_100g	<input checked="" type="checkbox"/>	1336
5	fat_100g	<input checked="" type="checkbox"/>	1330
6	carbohydrates_100g	<input type="checkbox"/>	1327
7	nutriscore	<input type="checkbox"/>	1324
8	saturated-fat_100g	<input type="checkbox"/>	1323
9	salt_100g	<input type="checkbox"/>	1320
10	sodium_100g	<input type="checkbox"/>	1320
11	nutrition-score-fr_100g	<input type="checkbox"/>	1319
12	nutrition-score-uk_100g	<input type="checkbox"/>	1319
13	sugars_100g	<input type="checkbox"/>	1307

Close

Open Food Fact Database Explorer

potato-crisps

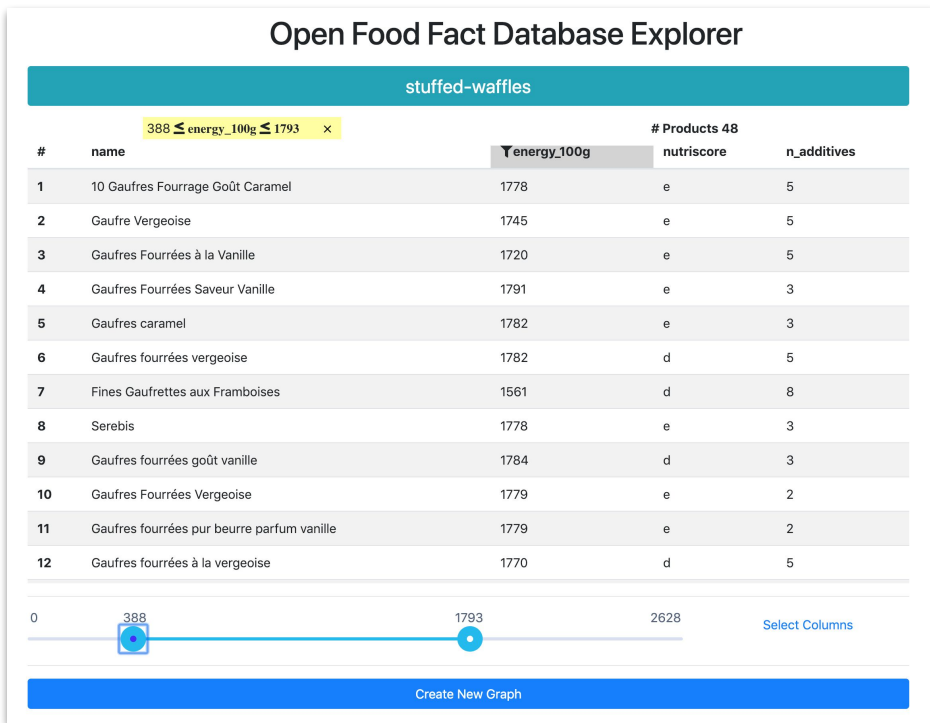
Products 1393

#	name	energy_100g	proteins_100g	fat_100g
1	Cornish Cruncher Cheddar & Pickled Onion Hand Cooked	2054	6.2	26.5
2	Winter Berries & Prosecco Hand cooked crisps	2192	6.8	30
3	Original Kettle Style Potato Chips	2090	3.57	32.1
4	Hand Cooked Potato Chips	2126	5.2	26.8
5	Hand Cooked Potato Chips Mature Cheddar & Caramelized Onion	2095	6.1	26.6
6	Original Sweet Potato Chips	2240	3.57	28.6
7	Stax® Original	2240	0	28.6
8	Kettle Cooked Sea Salt & Cracked Pepper	2240	7.14	32.1
9	Classic	2310	6.9	34.5
10	Lay's Classic	2390	7.14	35.7
11	Wavy original	2690	7.14	35.7
12	Jimmy Chips - BBQ Flavored	2240	7.14	28.6



Create New Graph

Features of the tool and visualizations



Column based filters

- helps to find outliers

Features of the tool and visualizations

Open Food Fact Database Explorer

meat-based-products

Products 3392

#	name	energy_100g	nutriscore	sugars_100g	n_additives
1	Blanquette de Volaille et son Riz	450	b	0.5	2
2	Tripoux	1682	d	1.9	0
3	Chicken pad thai	619	a	2.9	0
4	Creamy Chicken Pie	1172	d	1	0
5	Sauce bolognaise	0		0	0
6	grilled Cajun chicken breast, spicy wedges & sour cream	354	a	2.7	2
7	Poulet Korma & Riz Pilaf	590	a	0.3	0
8	Poulet Tikka Masala Et Riz Pilaf	619	a	0.6	0
9	Tomato & Sausage Pasta Sauce	556	c	4.6	0
10	Pulled Pork & Chorizo Feijoada	622	a	0.5	4
11	Chicken & Mushroom Risotto	490	a	0.7	1
12	Lemon & Ginger Chicken Curry	410	a	1.6	0



Create New Graph

Open Food Fact Database Explorer

meat-based-products

2731 ≤ energy_100g ≤ 3766 ×

Products 6

#	name	energy_100g	nutriscore	sugars_100g	n_additives
1	Paëlla	2787	d	0.6	0
2	Pâté de foie de volaille	2891		0	0
3	Verre Fricandeau	2891		0	0
4	4 brochettes de boeuf	3230	d	0.5	0
5	Huile de noix	3766	e	0	0
6	Grattons de Canard	2749	e	0.5	0



Create New Graph

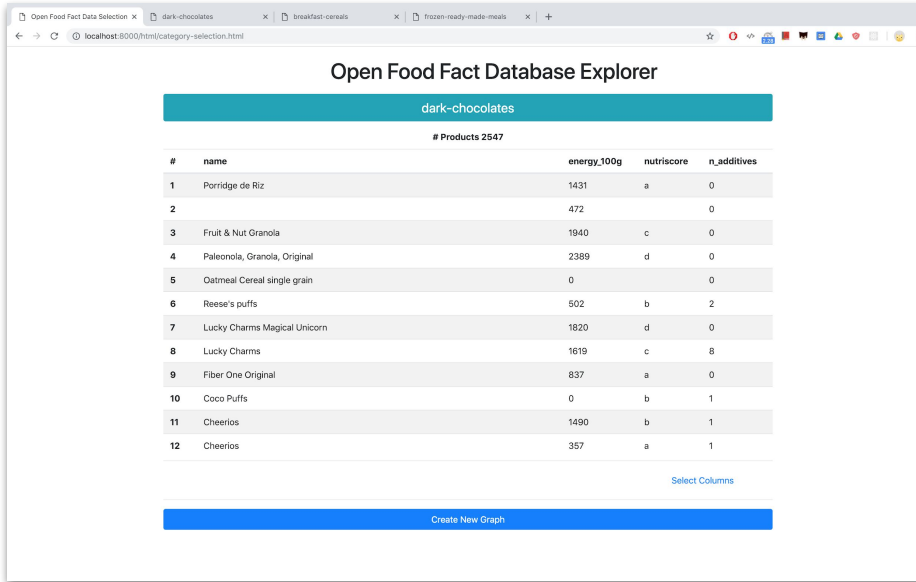
Features of the tool and visualizations



Interactive scatter plot matrix

- category base analyses
- provides multidimensional view
- helps to find outliers
- helps to reveal relations
- basic statistics
- changeable axes

Features of the tool and visualizations



Open Food Fact Database Explorer

dark-chocolates

Products 2547

#	name	energy_100g	nutriscore	n_additives
1	Porridge de Riz	1431	a	0
2		472		0
3	Fruit & Nut Granola	1940	c	0
4	Paleonola, Granola, Original	2389	d	0
5	Oatmeal Cereal single grain	0		0
6	Reese's puffs	502	b	2
7	Lucky Charms Magical Unicorn	1820	d	0
8	Lucky Charms	1619	c	8
9	Fiber One Original	837	a	0
10	Coco Puffs	0	b	1
11	Cheerios	1490	b	1
12	Cheerios	357	a	1

Select Columns

Create New Graph

Studying categories on different tabs

- Provides an opportunity to compare different categories

Demonstration

Summary

- We have developed an interactive tool to browse the Open Food Fact database and reveal the relations using visualizations.

The end.