

Analysis of the USDA Packaged Meals Dataset

Data Categories

fdc_id

brand_owner

gtin_upc

ingredients

serving_size

serving_size_unit

household_serving_fulltext

branded_food_category

data_source

modified_date

available_date

market_country

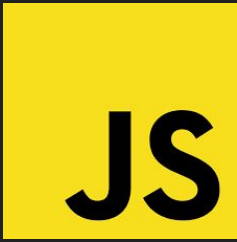


3 Main Questions

Most calorie
dense
categories?

Most common
ingredients?

What
ingredients
show up
together?



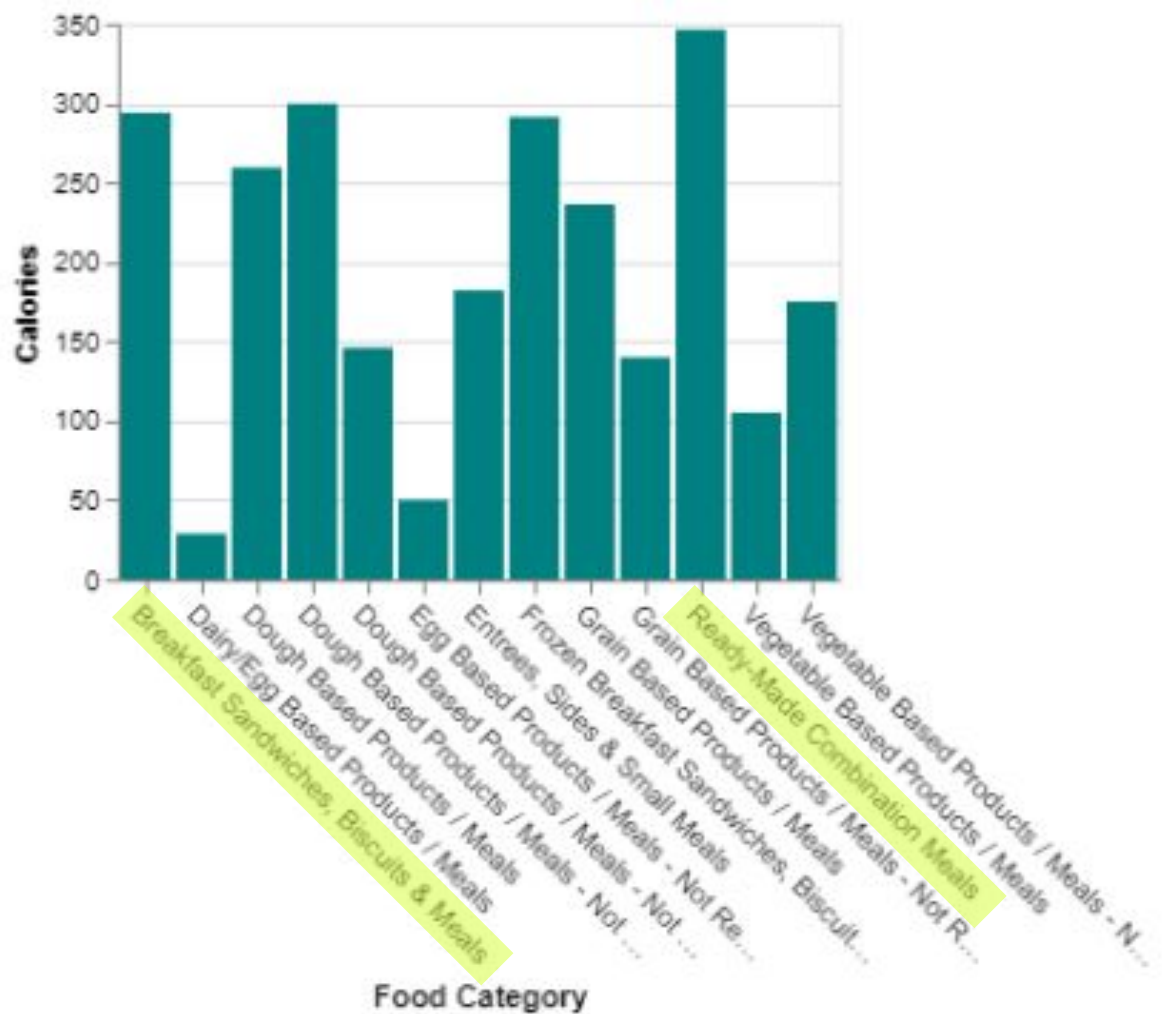
Our Process

1. Just Looked Around
2. Started With Given Questions
3. Visualized Results





Caloric Breakdown





Most Common Ingredients

Obtaining ingredients

Cooked red quinoa (water, red quinoa), cooked brown rice (water, brown rice), roasted sweet potatoes, cooked black beans, ...

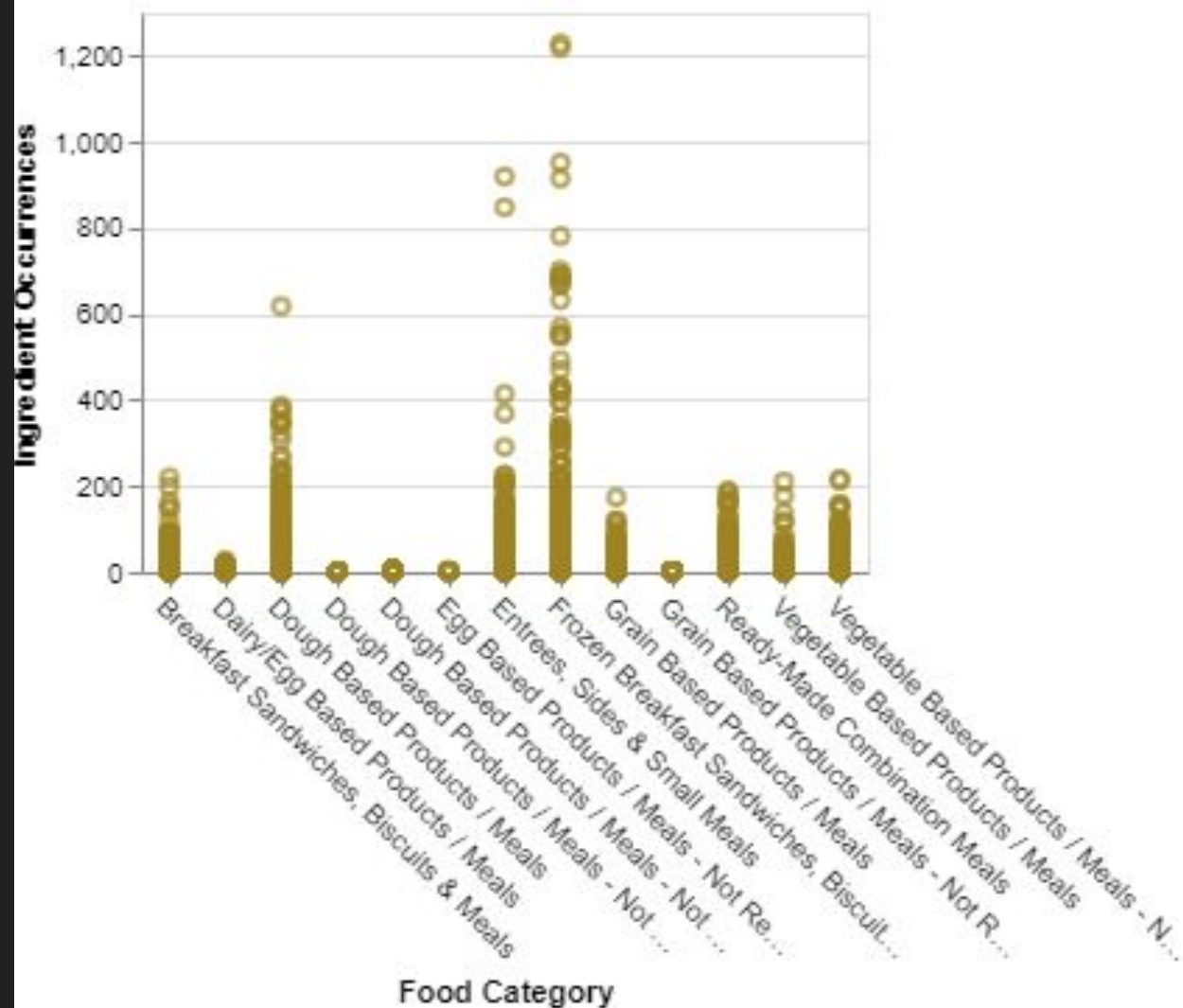
WATER, RED QUINOA, BROWN RICE, BROWN RICE, ROASTED SWEET POTATOES,
COOKED BLACK BEANS

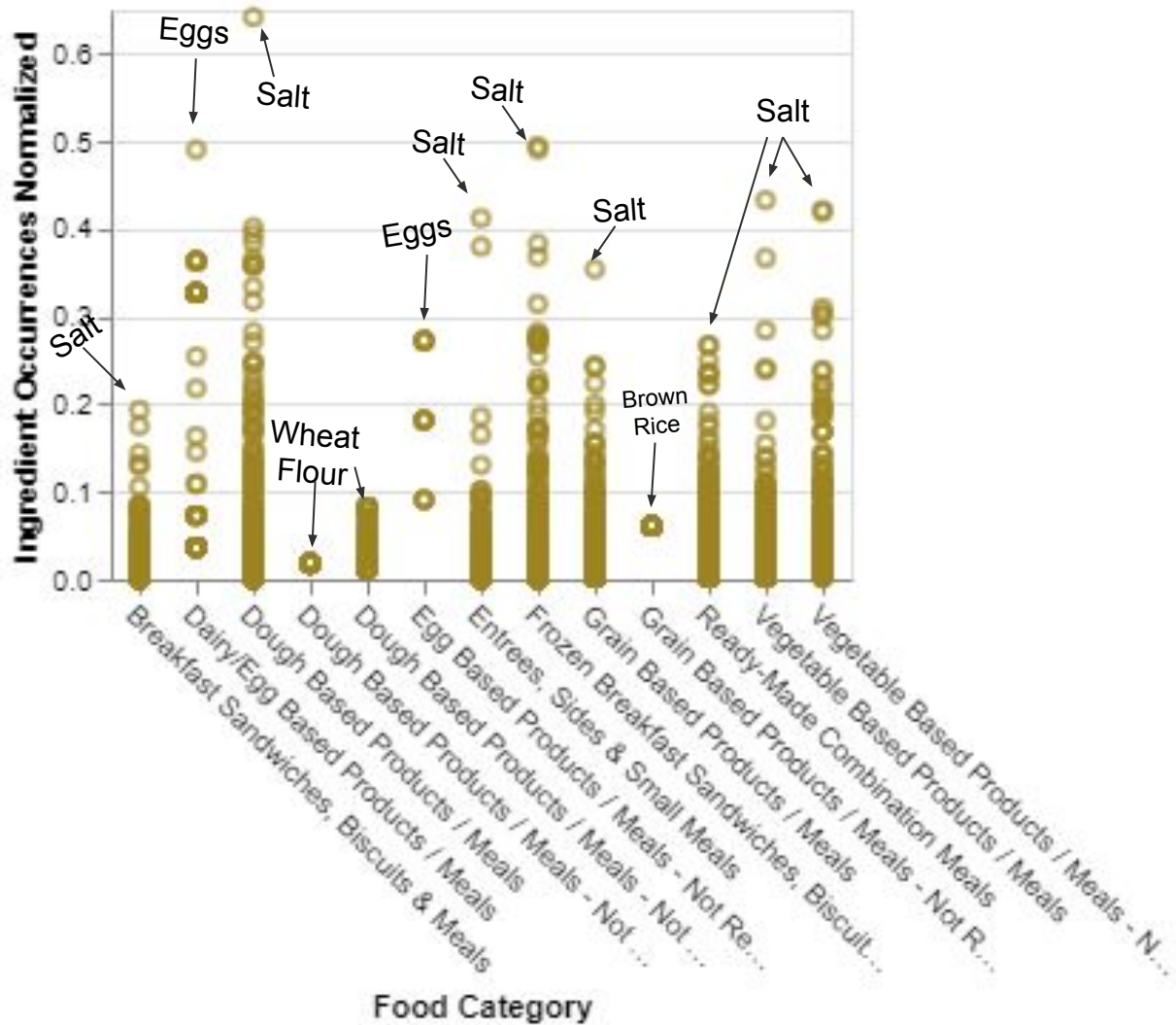
ORGANIC ONION → ONIONS

TOMATO* → TOMATOES

Ingredient	Appearances
SALT	3808
WATER	3301
SUGAR	2398
SPICES	2148
CITRIC ACID	2120

ENZYMES	1831
NATURAL FLAVORS	1586
FOLIC ACID	1541
NIACIN	1476
RIBOFLAVIN	1463
SODIUM PHOSPHATES	1451



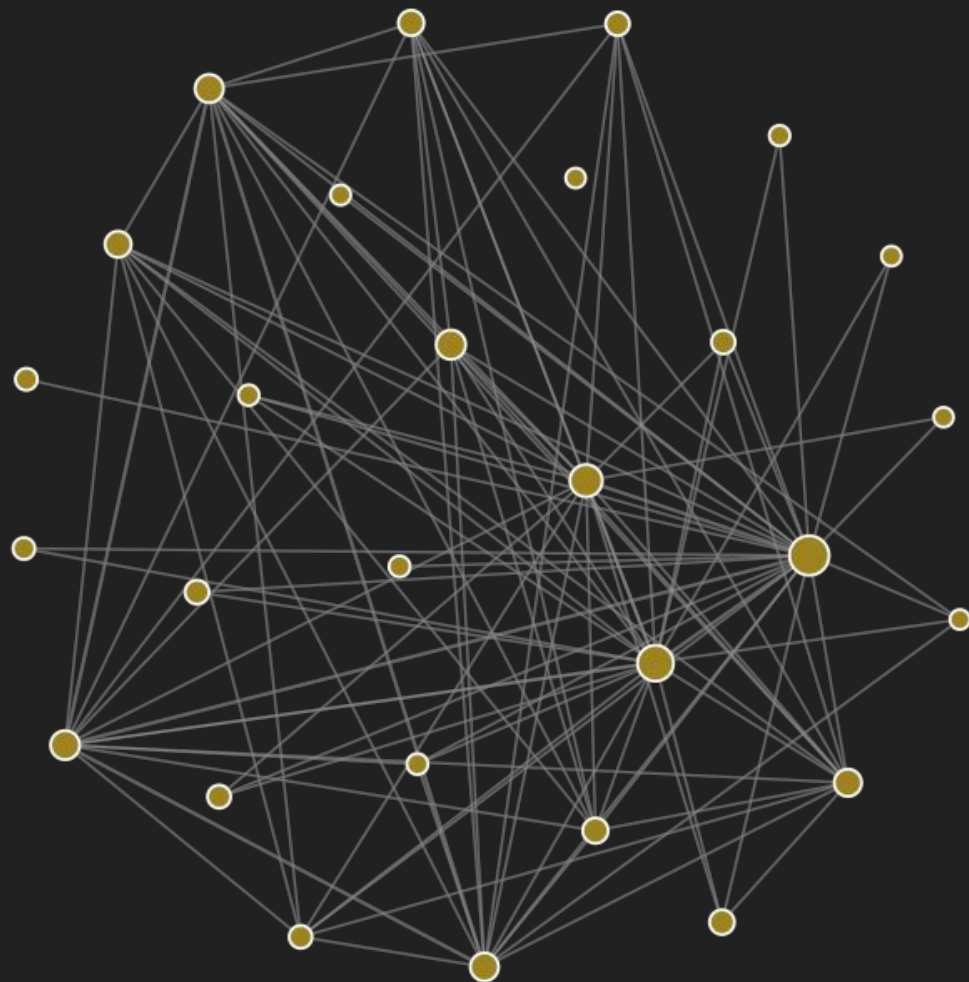




Connections

Ingredient	SALT	WATER	SUGAR	SPICES	CITRIC ACID	ENZYMES	NATURAL FLAVORS	FOLIC ACID	NIACIN	RIBOFLAVIN	SODIUM PHOSPHATES
SALT	0	2941	2361	2086	2013	1830	1539	1495	1441	1451	1451
WATER	2941	0	1983	1778	1672	1579	1135	1301	1269	1249	1178
SUGAR	2361	1983	0	1534	1442	1323	1165	1225	1188	1180	1103
SPICES	2086	1778	1534	0	1190	1094	979	939	893	912	746
CITRIC ACID	2013	1672	1442	1190	0	1217	967	991	987	991	940
ENZYMES	1830	1579	1323	1094	1217	0	742	995	978	1004	1066
NATURAL FLAVORS	1539	1135	1165	979	967	742	0	722	659	666	618
FOLIC ACID	1495	1301	1225	939	991	995	722	0	1399	1353	876
NIACIN	1441	1269	1188	893	987	978	659	1399	0	1305	859
RIBOFLAVIN	1451	1249	1180	912	991	1004	666	1353	1305	0	878
SODIUM PHOSPHATES	1451	1178	1103	746	940	1066	618	876	859	878	0
WHEAT FLOUR	1407	1106	1057	784	840	878	605	999	983	1005	830
SOYBEAN OIL	1399	1366	1136	920	990	955	585	848	841	872	820
ONIONS	1211	994	785	841	604	601	605	463	434	428	336
XANTHAN GUM	1245	1202	940	791	866	893	575	684	635	683	756
DEXTROSE	1237	1177	995	842	831	723	565	715	726	745	716
CHEESE CULTURES	1207	977	830	719	833	1151	515	572	560	578	718
MILK	1192	990	849	717	746	907	528	580	578	596	613
MALTODEXTRIN	1092	753	896	699	761	632	703	513	480	491	554
CREAM	1060	857	720	630	624	756	457	472	478	483	630
CORN STARCH	1031	831	743	579	554	590	507	460	466	456	542

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Future Research

Give ingredients weights based on
lexical order

Organic vs. conventionally grown

Macronutrients

Brands

Food categories



Thank You!