

# FATER GEO-ANALYTICS CHALLENGE

Analyzing Fater's Diaper Market Potential and Enhancing Revenue Estimation for Naples\* Stores in the Entire Province: A Socio-Demographic, Territorial, and Points of Interest Perspective.



**Raza Mehar**

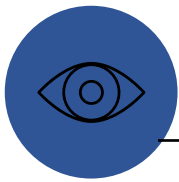


**Najam Mehdi**



**Pujan Thapa**

\* Includes all the 92 municipalities of the Metropolitan City of Naples, Campania, Italy.



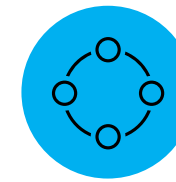
## EXPLORE

- Reviewing metadata
- Inspecting heads and data types
- Understanding data dimensions
- Performing spatial exploration



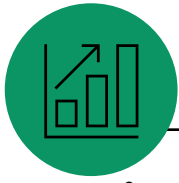
## PRE-PROCESS

- Cleaning the data
- Performing Spatial processing
- Merging the datasets
- Handling missing values.



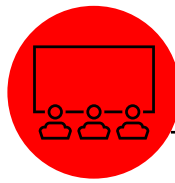
## ANALYZE

- Descriptive statistics
- Univariate analysis
- Bivariate analysis
- Correlation analysis
- Contingency table
- Population gravitation analyses
- Pareto Analysis
- Geo-spatial analysis
- Predictive modeling



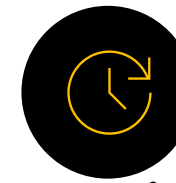
## SHARE

- Findings & Observations



## ACT

- Recommendations



## COMPLIMENTARY

- Population Dynamics of Naples up till 2043
- Population and Household Projections for South Italy
- Strategies



## BIBLIOGRAPHY & REFERENCES

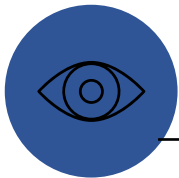


## ADDENDUM

- List of stores with the highest potential



## LIBRARIES & MODULES



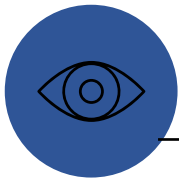
# EXPLORE

Exploring Data Types, Dimensions, and Spatial Relationships

Stores Dataset	Shapes Dataset	Demographics Dataset	Gravitation Dataset
store_ID: int store_name: str store_type: str store_size: float parking: str address: str lat: float long: float comune: str province: bool potential: float	geometry : str microcode: int	microcode: int district: str province: str region: str population: int population_m: int population_f: int population_age_00_04_yr: int population_age_05_14_yr: int population_age_15_34_yr: int population_age_35_44_yr: int population_age_45_54_yr: int population_age_55_64_yr: int population_age_65_up_yr: int	Unnamed: int microcode: int daytype: int time_slot: int datatype: str media_annuale: float
Dimension: 1270, 11	Dimension: 10077, 2	Dimension: 10077, 14	Dimension: 806160, 6

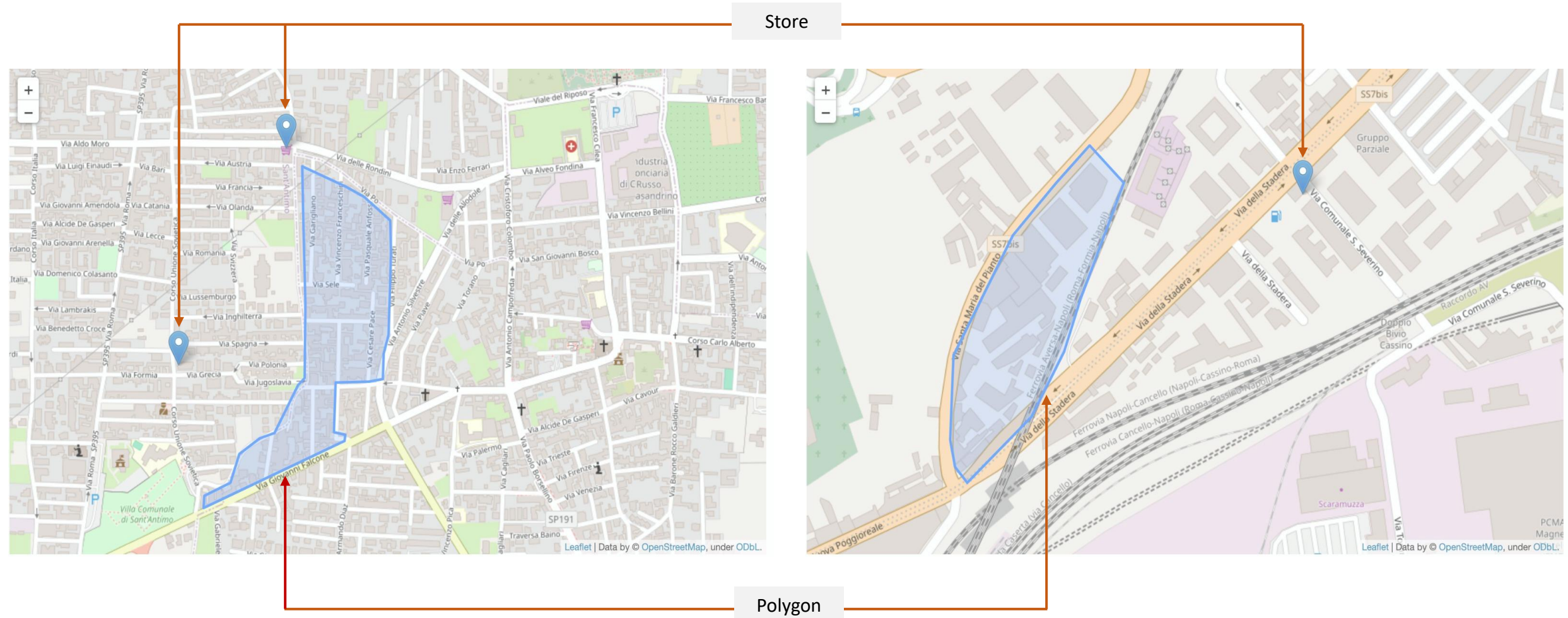
Requires spatial exploration

**Note:** The datasets have not been processed yet.



# EXPLORE

Performing spatial exploration



**Note:** Plotting the stores and polygons on the maps to explore whether there is mapping between them.

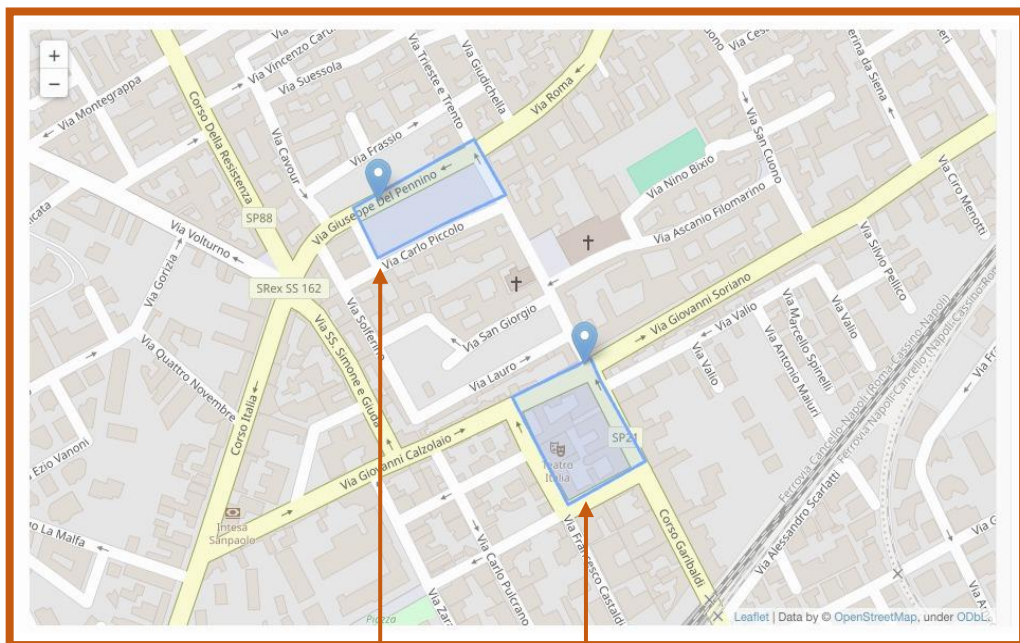




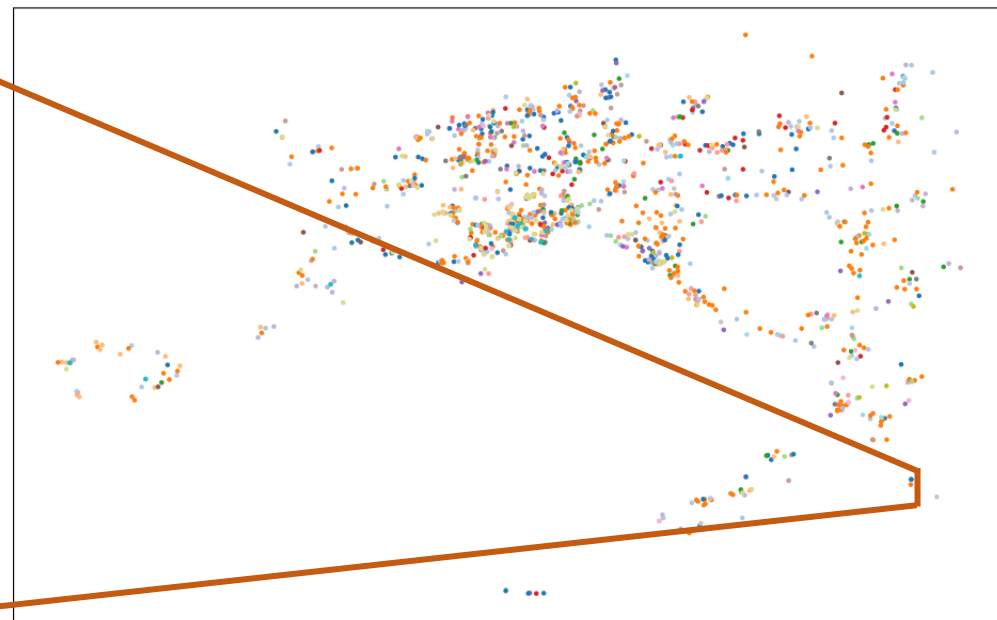
# PRE-PROCESS

Performing spatial processing

Store



Stores inside the correct polygons



- Stores
- DECO' MARKET
- CONAD
- PELLICANO
- MARKETPIU'
- OTTIMO
- CONAD CITY
- SISA
- MD
- EUROESSE
- CARREFOUR MARKET
- N. D.
- SOLE365
- DECO' SUPERMERCATI
- SIGMA
- CARREFOUR EXPRESS
- SEBON
- DOK
- ETE
- TODIS
- EUROSPIN
- IL SUPERMERCATO
- ENNESI
- MAXI SIDIS
- IL PUNTO SIGMA
- SAPORI & DINTORNI
- DODECA
- SP SUPERMERCATI PICCOLO
- PENNY
- CONAD SUPERSTORE
- FLOR DO CAFE'
- DECO' MAXISTORE
- AMODIO
- GRAN RISPARMIO
- MARGHERITA
- SUPERMERCATI HELLO
- SUPERO'
- QUARI'
- MIO MERCATO
- DESPAR
- OK SIGMA
- SPESA MIA PICK UP
- EUROSPAR
- DIMEGLIO
- AUCHAN
- QUI DISCOUNT
- DECO' SUPERSTORE
- PREMIUM SU
- IPERCOOP
- CRAI
- INTERSPAR
- LIDL
- FAMILA SUPERSTORE
- MAXIPIU'
- SIGMA SUPERSTORE
- SIMPATIA CRAI
- A&O
- SIDIS
- SAI
- ENNE MARKET
- SPENDIBENE
- COOP
- COMAS SUPERMERCATI
- PELLICANO EXPRESS
- DESPAR EXPRESS
- SUPERFOOD
- SPAZIO CONAD
- GRAN RISPARMIO MINI
- SIDISMINI
- BRIO'
- GRAN RISPARMIO SUPER
- PICK UP
- ACQUA & SAPONE
- PROSHOP
- OPPORTUNITY SHOP
- MISTER RISPARMIO
- DECO' IGIENE E BELLEZZA
- AMATO POINT
- PILATO
- TUTTO PER TUTTI
- UNIVERSO DEL PULITO
- SHUKI
- PUNTOPI
- IPER MAGAZZINI MAURY'S

**Note:** Plotting the stores inside the correct polygons to extract accurate micro-codes.



# PRE-PROCESS

## Analyzing Categorical Feature Scales

Categorical Feature	Description
store_ID	Unique store identification number
store_type	Type of the store: (IPR: Hypermarket; SUP: Supermarket; LIS; Libero Servizio; SSD: Drugstore; DIS: Discount Store)
parking *	True is parking is available, else False
comune	Municipality where the store is situated
microcode	ISTAT microcell
daytype	1: weekday; 2: weekend
time_slot	2: 07 am – 10 am; 3: 10 am – 13 pm; 4: 13 pm – 14 pm; 5: 14 pm – 17 pm; 6: 17 pm – 20 pm
datatype	F1: population under 18 years; F2: population aged 18 – 30 years; F3: population aged 31 – 40 years; F4: population aged 41 -50 years; F5: population aged 51 – 60 years; F6: population over 60 years; Gf: female population; Gm: male population

**Note:** All the datasets have been merged; data has been cleaned.

\* *parking is a Boolean feature.*



# PRE-PROCESS

## Analyzing Numerical Feature Scales

Target variable	Numerical Feature		Description	
	store_size		Size of the store	
	potential		Italian diaper market (In 1000s)	
	population		Total population	
	population_m		Male population	
	population_f		Female population	
	population_age_00_04_yr		-	
	population_age_05_14_yr:		-	
	population_age_15_34_yr		-	
	population_age_35_44_yr		-	
	population_age_45_54_yr		-	
	population_age_55_64_yr		-	
	population_age_65_up_yr		-	
	annual_average		the yearly average of people gravitating by the combination of microcode, daytype, time slot and datatype	



# PRE-PROCESS

## Handling missing values (1/2)

### Observations and Decision:

- The missing values account for 2.14% of total rows for *annual\_average* and 0.1% for other features.
- Despite 100,494 rows in the dataset, the missing values are relatively insignificant.
- However, given the potential importance of the *annual\_average* feature, a decision has been made to **impute the missing values in the numerical features**.

Numerical Feature	Count of missing values
population	14
population_m	14
population_f	14
population_age_00_04_yr	14
population_age_05_14_yr	14
population_age_15_34_yr	14
population_age_35_44_yr	14
population_age_45_54_yr	14
population_age_55_64_yr	14
population_age_65_up_yr	14
annual_average	2145

Categorical Feature	Count of missing values
microcode	14
daytype	14
time_slot	14
datatype	14

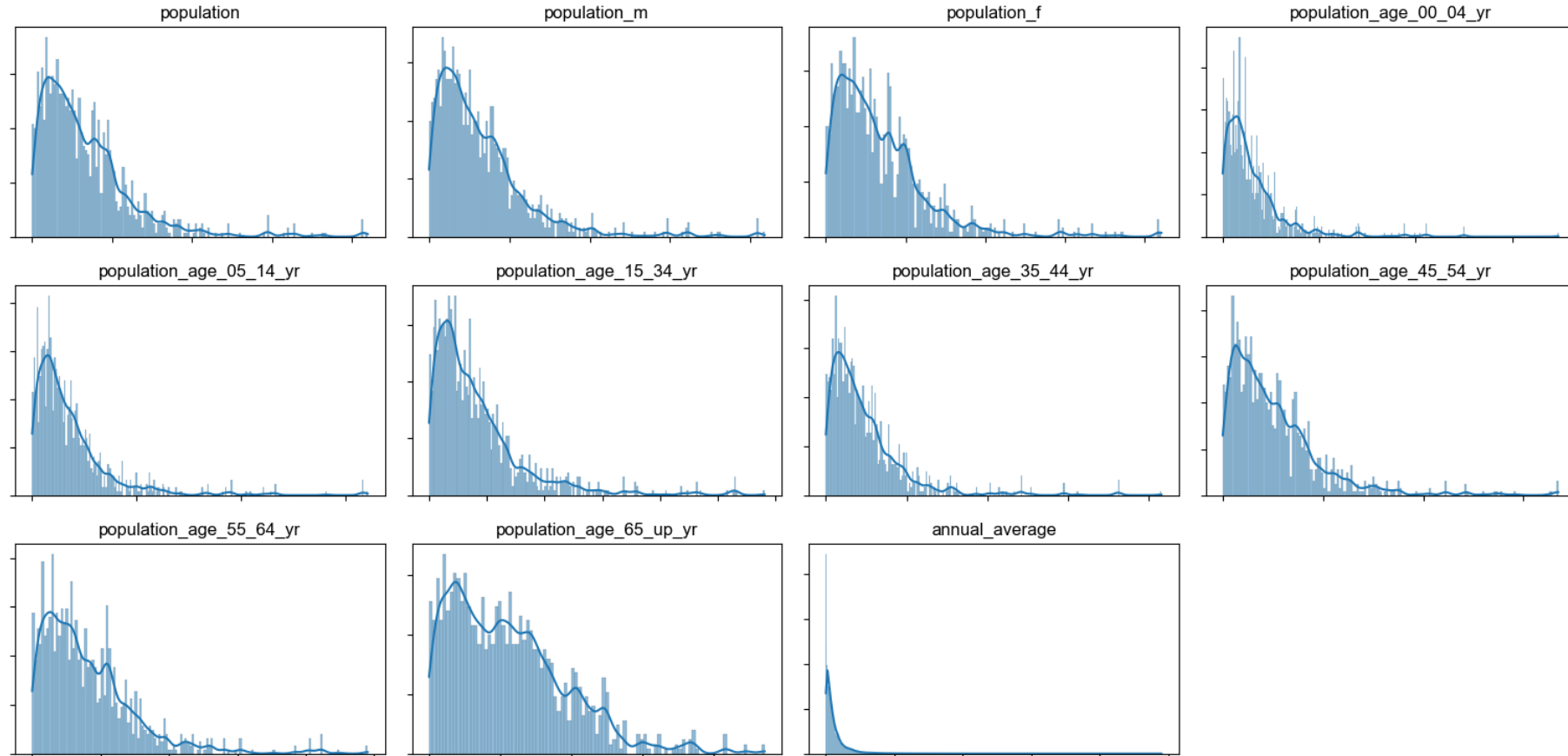




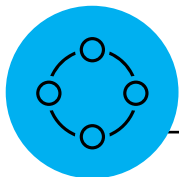
# PRE-PROCESS

## Handling missing values (2/2)

Plotting histograms to check for normality in the numerical features with missing values.



**Observations & Decision:** Upon observing histograms, it has been determined that the features do not adhere to a normal distribution. As a result, **missing values will be imputed using the median.** The **missing categorical values are imputed using the mode.** There are no duplicate values in the data.

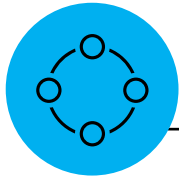


# ANALYZE

## Exploring Descriptive Statistics

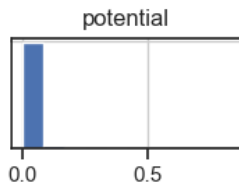
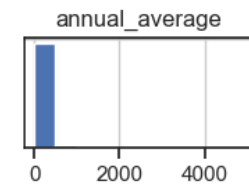
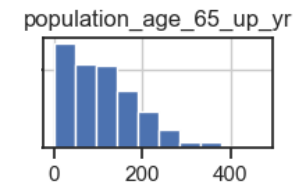
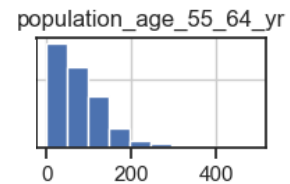
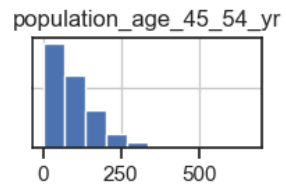
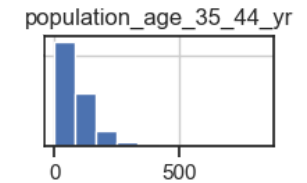
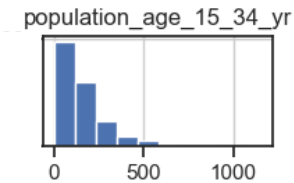
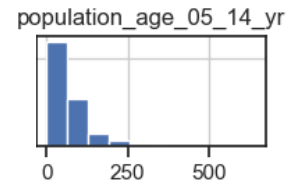
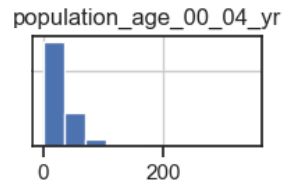
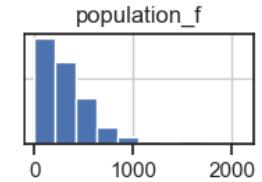
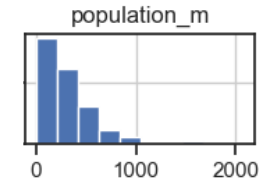
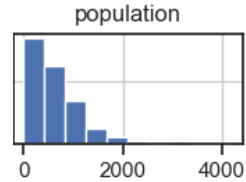
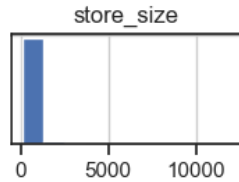
Numerical Feature	Min	Q1	Median	Mean	Q3	Max	SD
store_size	100.0	150.0	250.0	413.6	480.0	11978.0	641.8
population	0.0	253.0	513.5	655.2	891.0	4197.0	582.7
population_m	0.0	122.0	249.0	318.4	425.0	2089.0	289.5
population_f	0.0	133.0	270.5	336.8	465.0	2108.0	294.2
population_age_00_04_yr	0.0	11.0	22.0	30.5	39.0	348.0	33.1
population_age_05_14_yr:	0.0	26.0	52.0	72.5	91.0	642.0	77.3
population_age_15_34_yr	0.0	59.0	122.0	164.4	214.0	1163.0	161.2
population_age_35_44_yr	0.0	35.0	70.0	93.8	122.0	831.0	93.3
population_age_45_54_yr	0.0	36.0	78.0	100.8	140.0	670.0	91.3
population_age_55_64_yr	0.0	31.0	64.0	81.5	112.0	491.0	69.9
population_age_65_up_yr	0.0	45.0	98.5	111.7	159.0	472.0	82.5
annual_average	1.0	25.0	68.0	122.9	147.0	4903.0	182.6
Potential	0.001	0.002	0.005	0.01	0.013	0.83	0.04

**Observation:** As can be seen, there is a difference between the mean and standard deviation of the features.

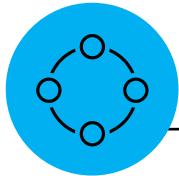


# ANALYZE

## Univariate Analysis: Visualizing Numerical Features

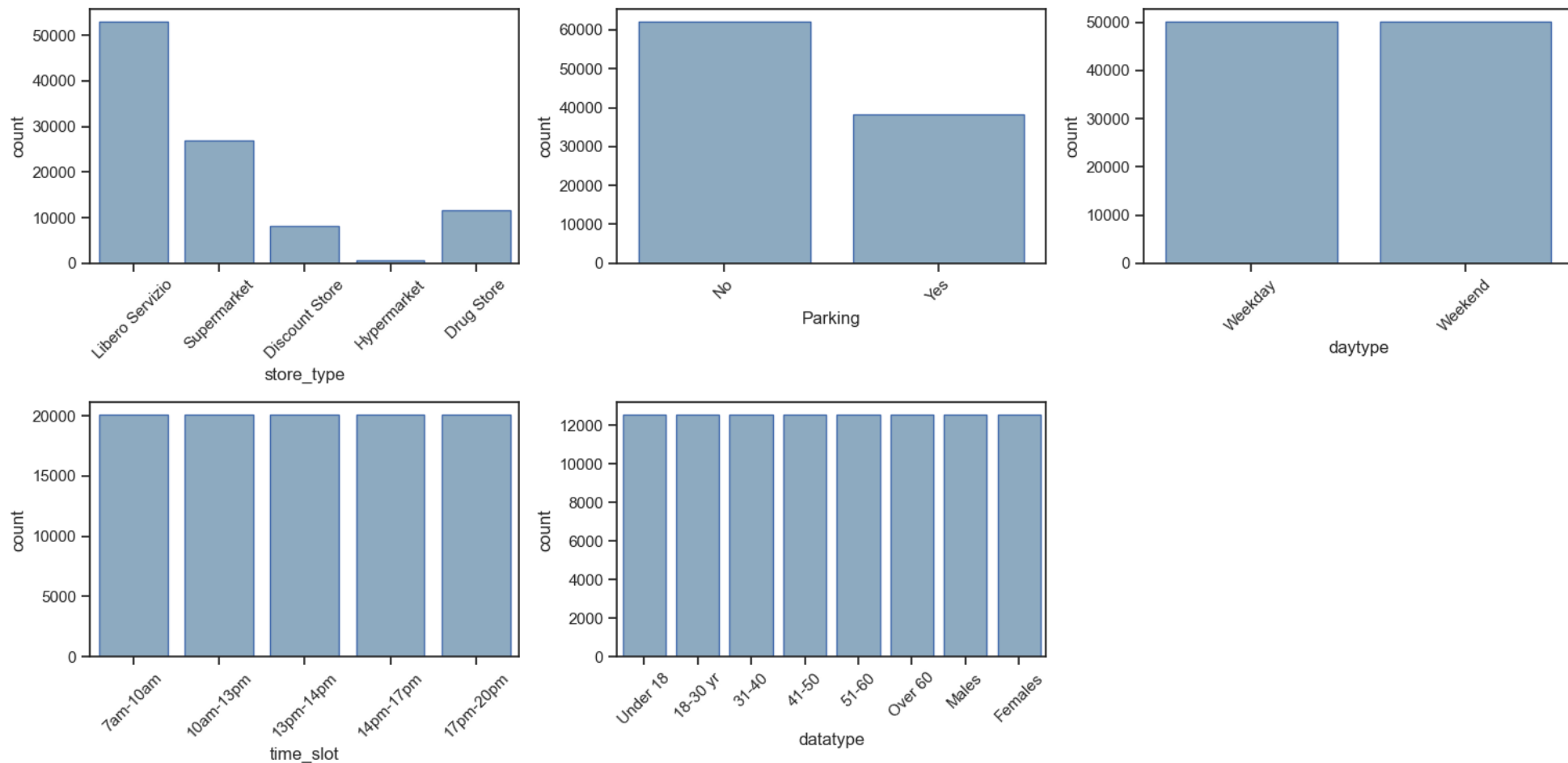


**Observation:** It has been established that none of the numerical features follow a normal distribution; specifically, *store\_size*, *annual\_average*, and *potential* appear constant.

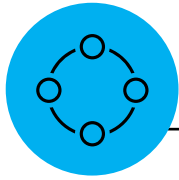


# ANALYZE

## Univariate Analysis: Visualizing Categorical Features

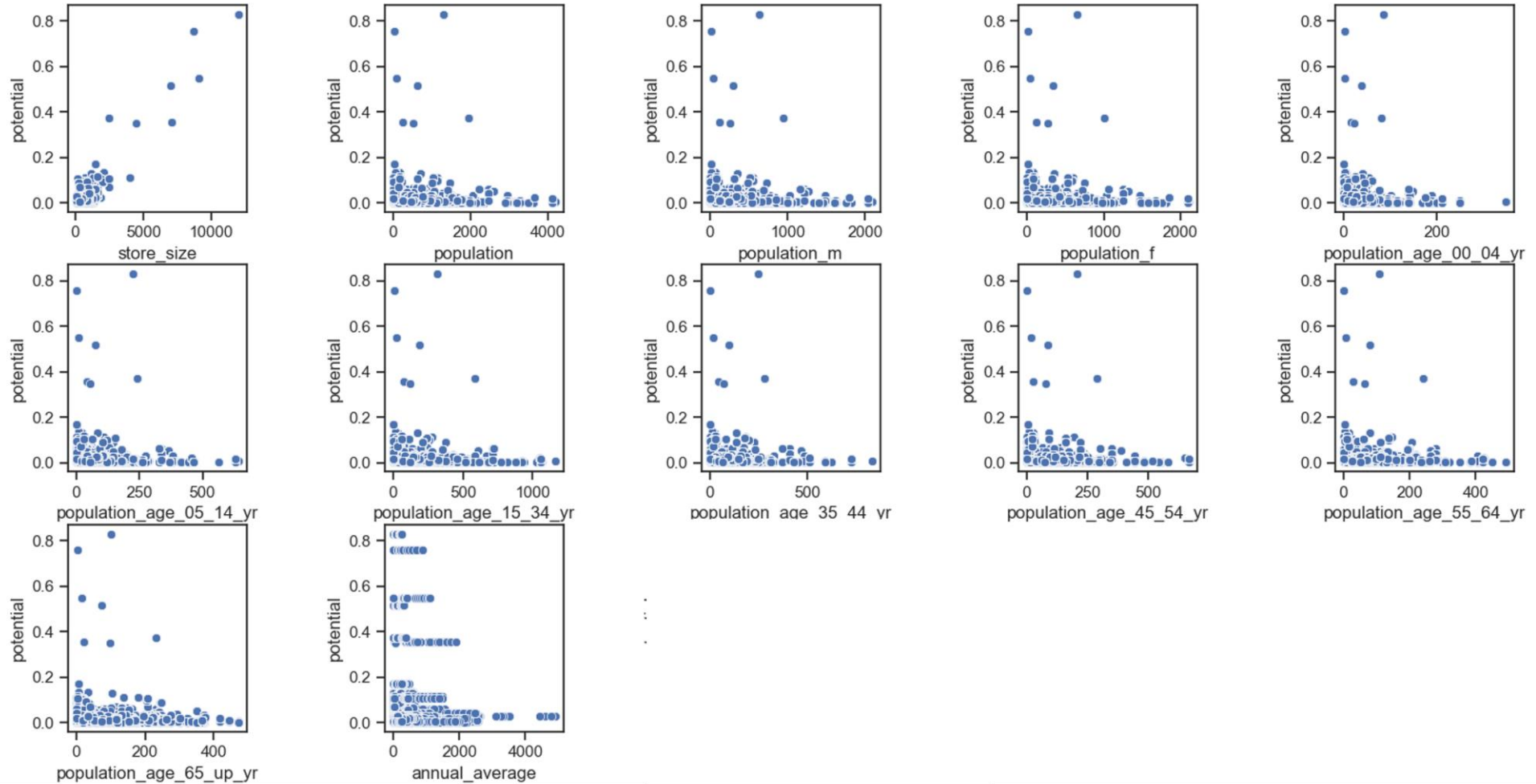


**Observation:** As can be seen from the bar charts, *Libero Servizio* and *Supermarkets* dominate in the store type category, while most stores have no parking.

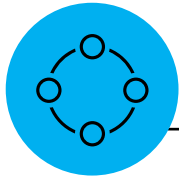


# ANALYZE

## Bivariate Analysis: Exploring Relationships Between Numerical Predictors and Potential

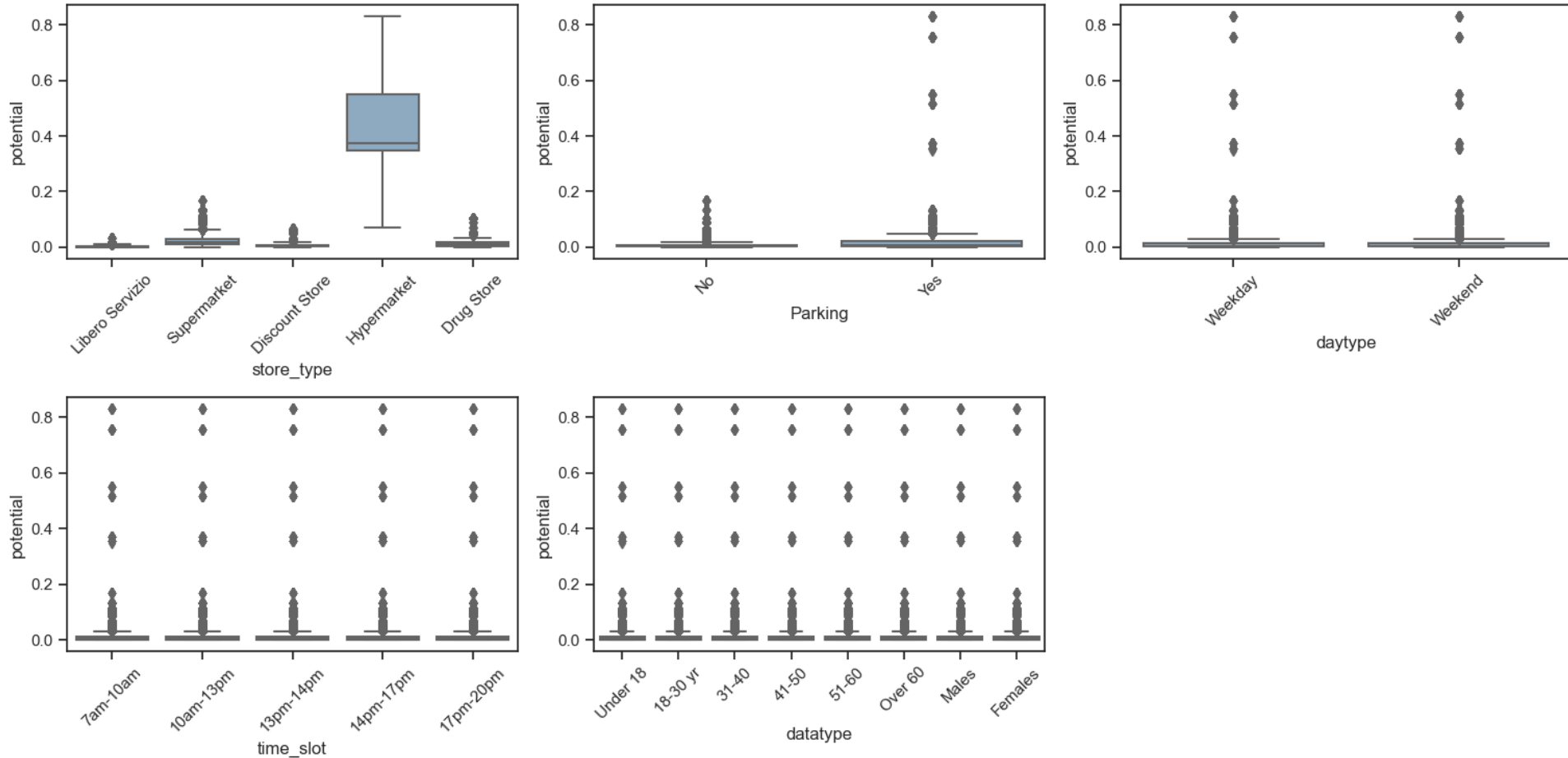


**Observation:** There appears to be a somewhat linear relationship between *store\_size* and *potential*.



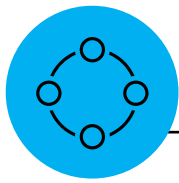
# ANALYZE

## Bivariate Analysis: Exploring Relationships Between Categorical Predictors and Potential



**Observation:** It is evident that the potential values for *Hypermarkets* are generally much larger and have greater variability as compared to other stores. Additionally, stores with parking exhibit somewhat higher potential values than those without parking. **An additional statistical test will be conducted to determine the statistical significance of the observed differences in potential values between store types and parking status.**





# ANALYZE

## Hypothesis Testing: Assessing Statistical Significance of Potential Differences Among Store Types and Parking Status

As the data is not normally distributed, hence non-parametric tests are being conducted.

### Kruskal-Wallis test on store type and potential

$H_0$ : There is no significant difference in the median potential among the different types of stores.

$H_1$ : There is a significant difference in the median potential among the different types of stores.

**Result:  $p$ -value: 0.0**

### Mann-Whitney U test on potential and parking status:

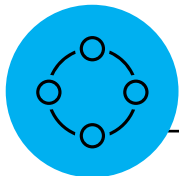
$H_0$ : There is no significant difference in the median between Potential and Parking Status.

$H_1$ : There is a significant difference in the median between Potential and Parking Status.

**Result:  $p$ -value: 0.0**

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**Observation:** Based on the very small  $p$ -values approaching 0, we can suggest that the differences in potential values between *store\_type* and *parking* are statistically significant, with more potential values lying within *Hypermarkets* and stores with parking. This implies that store type and parking status significantly influence potential values. **The correlation between them will determine if there is any linear relationship.**



# ANALYZE

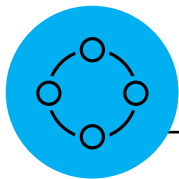
## Correlation Analysis: Examining Relationships Between Numerical Predictors and Potential

Multicollinearity between population features

store_size –	1.00	0.29	-0.05	-0.05	-0.05	-0.02	-0.02	-0.04	-0.03	-0.05	-0.07	-0.10	0.09	0.90
Parking –	0.29	1.00	0.06	0.06	0.05	0.08	0.07	0.07	0.07	0.06	0.05	-0.02	0.08	0.19
population –	-0.05	0.06	1.00	1.00	1.00	0.95	0.97	0.98	0.98	0.99	0.96	0.84	0.28	-0.03
population_m –	-0.05	0.06	1.00	1.00	0.99	0.95	0.97	0.99	0.98	0.98	0.96	0.82	0.29	-0.03
population_f –	-0.05	0.05	1.00	0.99	1.00	0.94	0.97	0.98	0.98	0.99	0.96	0.85	0.28	-0.03
population_age_00_04_yr –	-0.02	0.08	0.95	0.95	0.94	1.00	0.96	0.95	0.97	0.92	0.88	0.69	0.29	-0.00
population_age_05_14_yr –	-0.02	0.07	0.97	0.97	0.97	0.96	1.00	0.97	0.98	0.96	0.89	0.71	0.28	0.00
population_age_15_34_yr –	-0.04	0.07	0.98	0.99	0.98	0.95	0.97	1.00	0.97	0.97	0.93	0.75	0.29	-0.02
population_age_35_44_yr –	-0.03	0.07	0.98	0.98	0.98	0.97	0.98	0.97	1.00	0.96	0.91	0.76	0.28	-0.01
population_age_45_54_yr –	-0.05	0.06	0.99	0.98	0.99	0.92	0.96	0.97	0.96	1.00	0.94	0.81	0.28	-0.03
population_age_55_64_yr –	-0.07	0.05	0.96	0.96	0.96	0.88	0.89	0.93	0.91	0.94	1.00	0.86	0.27	-0.04
population_age_65_up_yr –	-0.10	-0.02	0.84	0.82	0.85	0.69	0.71	0.75	0.76	0.81	0.86	1.00	0.21	-0.07
annual_average –	0.09	0.08	0.28	0.29	0.28	0.29	0.28	0.29	0.28	0.28	0.27	0.21	1.00	0.07
potential –	0.90	0.19	-0.03	-0.03	-0.03	-0.00	0.00	-0.02	-0.01	-0.03	-0.04	-0.07	0.07	1.00

Correlation method used: Linear

**Observations:** It is apparent that all the population features are highly correlated, which is indicative of multicollinearity. For further analysis, only population\_m and population\_f will be used. There appears to be strong positive correlation between *potential* and *store\_size*.



# ANALYZE

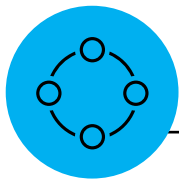
Contingency Table of Store Potential analyses with respect to store type, store size, and parking status.

Potential\Store Type	Discount Store	Hypermarket	Libero Servizio	Drug Store	Supermarket	Total
Low (0.001 - 0.241)	8242	160	53126	11601	26884	100013
Medium (0.241 - 0.601)	0	321	0	0	0	321
High (0.601 - 0.841)	0	160	0	0	0	160
Total	8242	641	53126	11601	26884	100494

Potential\Store Size	Small (100 - 1000)	Medium (1000 - 5000)	Large (5000 - 12701)	Total
Low (0.001 - 0.241)	94653	5360	0	100013
Medium (0.241 - 0.601)	0	81	240	321
High (0.601 - 0.841)	0	0	160	160
Total	94653	5441	400	100494

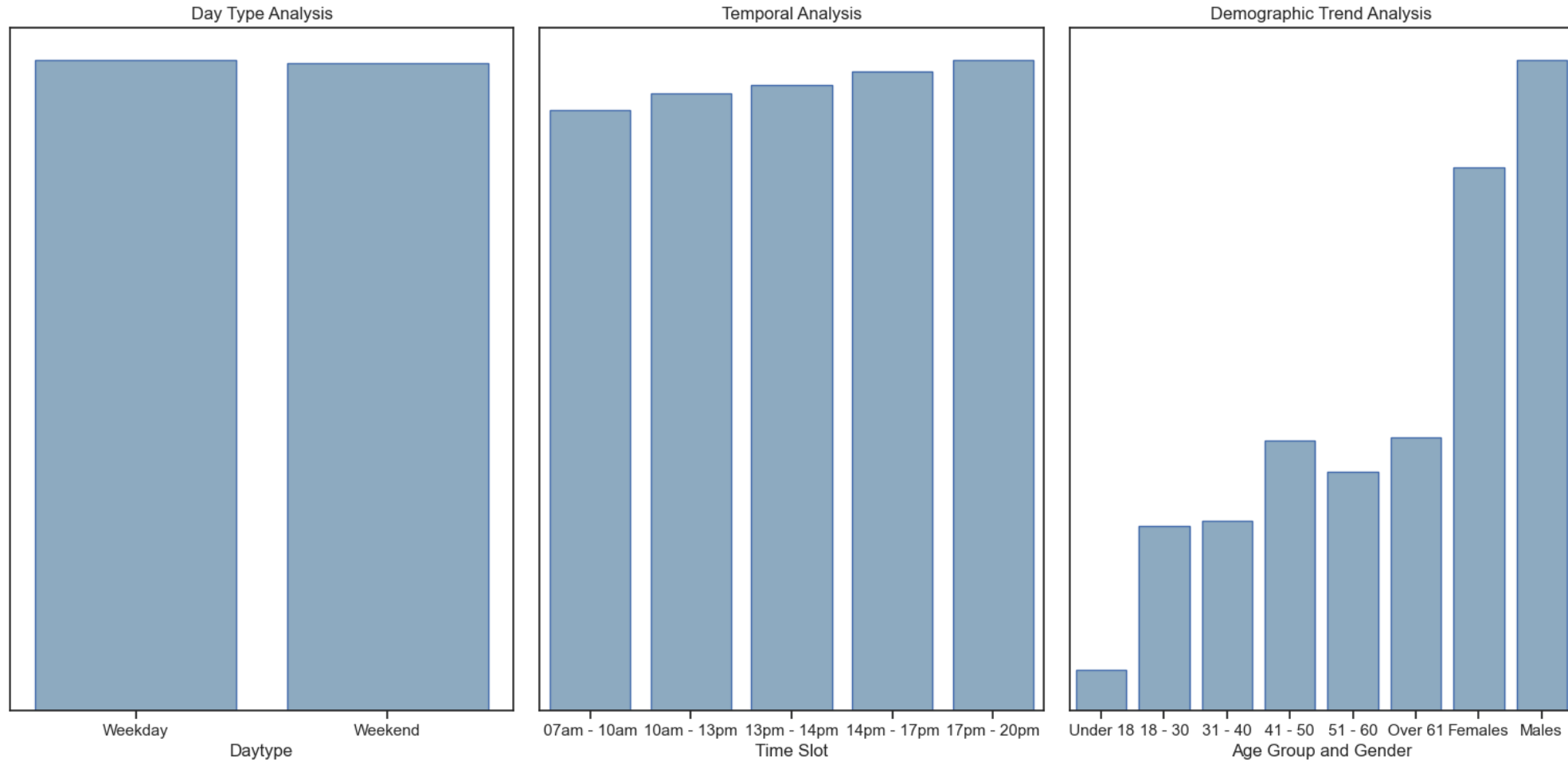
Potential\Parking	No	Yes	Total
Low (0.001 - 0.241)	62247	37766	100013
Medium (0.241 - 0.601)	0	321	321
High (0.601 - 0.841)	0	160	160
Total	62247	38247	100494

**Observation:** It is evident that Hypermarkets have the highest potential compared to other types of stores. Larger stores, in general, exhibit more potential. Additionally, stores with parking facilities also show increased potential.

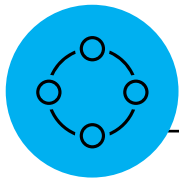


# ANALYZE

Average population gravitation analyses with respect to day type, time slot, and demographics.



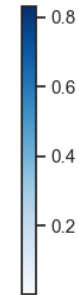
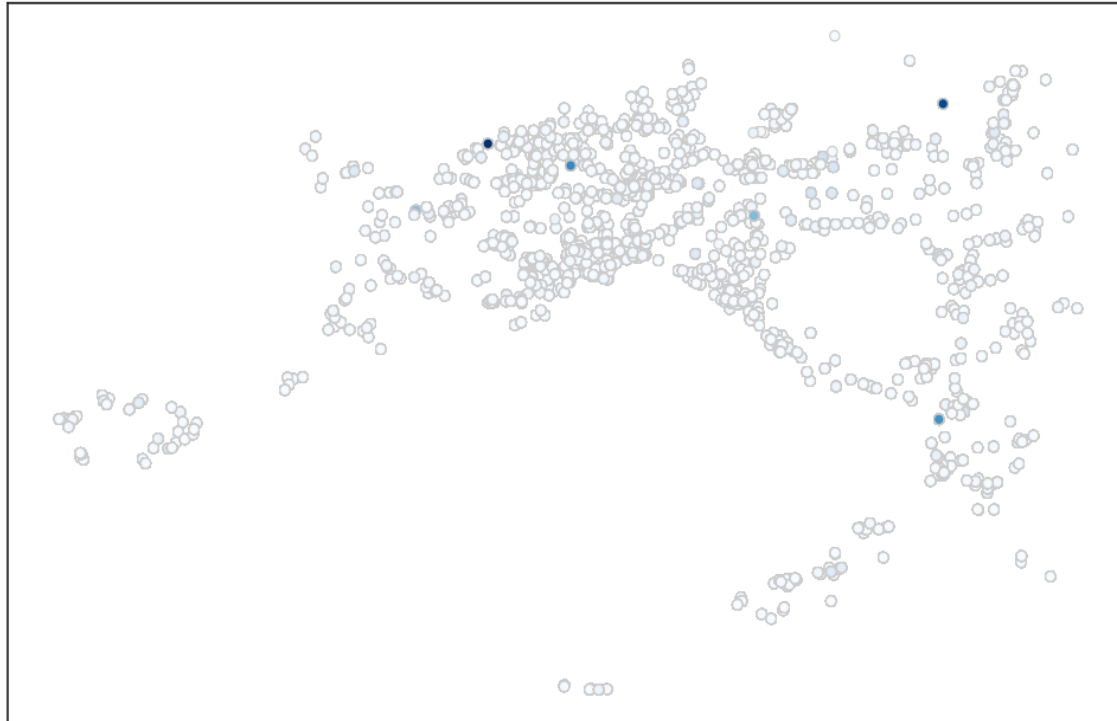
**Observations:** The gravitational pull during the 5-day workweek is like that of the 2-day weekend, implying that most people gravitate during those 2 weekend days. The time slot when the gravitational force is the strongest is from 17pm – 20pm. The demographic that gravitates the most consists of age groups 41–50 and those over 61. Males tend to gravitate towards stores the most.



# ANALYZE

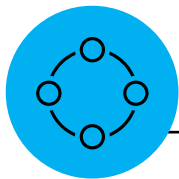
## Geo-Spatial analysis: Visualizing Potential Across Different Store Types

Average potential across stores



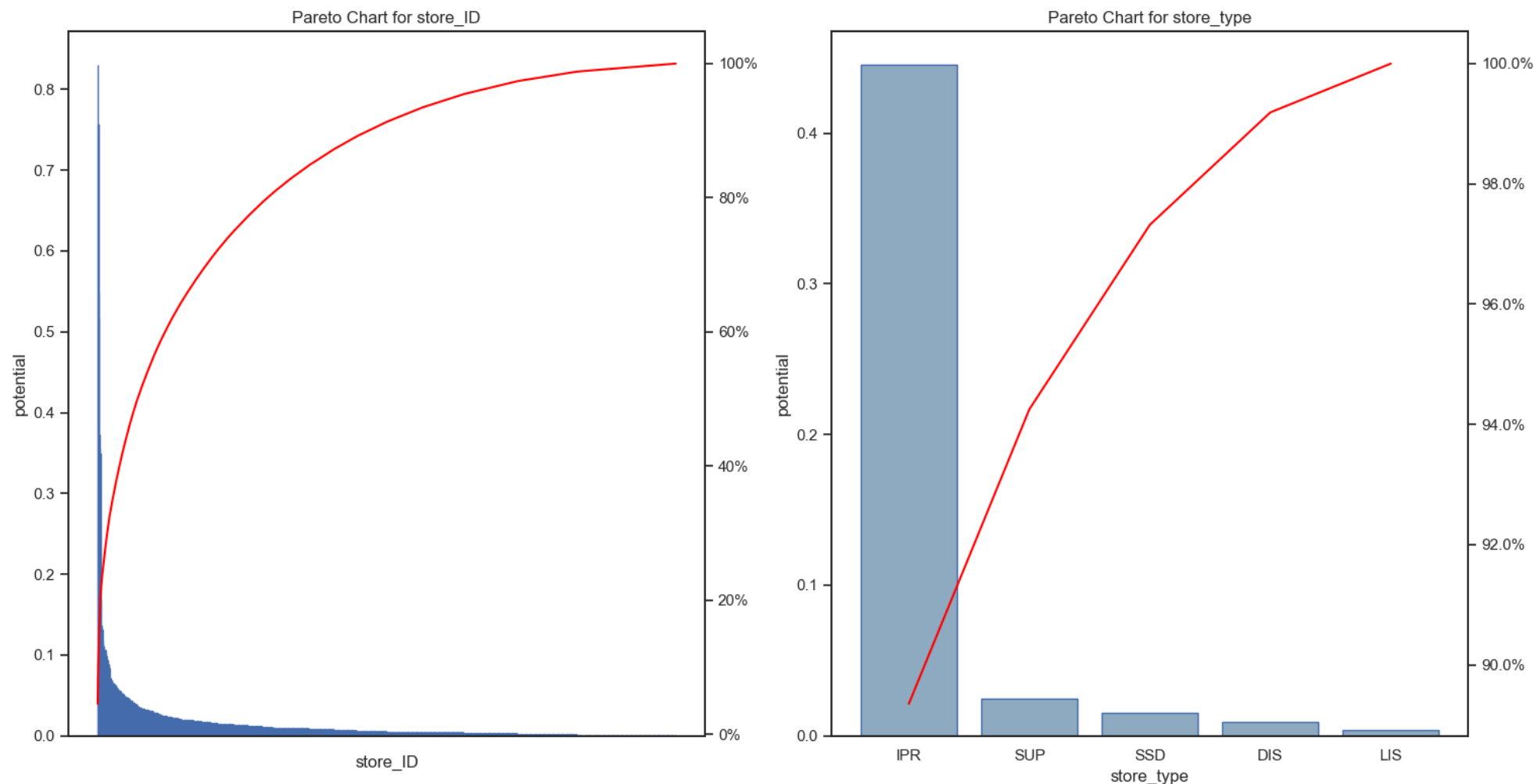
Store ID	Store Name	Comune	Store Type
7161	AUCHAN	GIUGLIANO IN CAMPANIA	IPR
7816	AUCHAN	NOLA	IPR
11626	AUCHAN	MUGNANO DI NAPOLI	IPR
11412	AUCHAN	POMPEI	IPR
23157	SPAZIO CONAD	VOLLA	IPR
7815	IPERCOOP	QUARTO	IPR
10356	IPERCOOP	AFRAGOLA	IPR
20804	SP SUPERMERCATI PICCOLO	CASTELLO DI CISTERNA	SUP
7456	DECO' SUPERSTORE	SANT'ANASTASIA	SUP
4381	CONAD SUPERSTORE	POMPEI	SUP

**Observation:** In the top 10 stores with the most potential, 7 are Hypermarkets, further substantiating the positive relationship identified previously in the correlation matrix between potential and Hypermarkets.



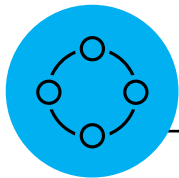
# ANALYZE

## Pareto Analysis: Identifying stores and store types that generate the most potential



**Observation:** As observed in the Pareto Charts, roughly 80% of the combined potential is generated by 20% of the unique stores, totaling 373 out of the 1270 stores. The list of these 373 stores is appended in the addendum section. Furthermore, Hyperstores, which constitute 20% of the store types, contribute to more than 80% of the potential.





# ANALYZE

## Predictive Modeling: Model Selection and Hyperparameter Tuning with Cross Validation

The hyperparameter tuning process involved exploring various configurations for the Decision Tree, Random Forest, Gradient Boosting, and AdaBoost models using 80% of the data for training while reserving 20% as a hold-out set—data that the model has not seen. Bagging was used to reduce variance (overfitting) while boosting was employed to reduce bias (underfitting).

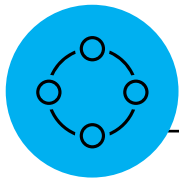
These model parameters were subjected to k-fold cross-validation ( $k = 10$ ) to identify the best-performing configurations. The choice of  $k = 10$  aligns with established best practices, supported by empirical evidence. Ron Kohavi's experiments on diverse real-world datasets indicate that a 10-fold cross-validation strategy strikes an optimal balance between bias and variance in model assessment.

Model	n_estimators	max_depth	learning_rate
Decision Tree	Not Applicable	None, 5	Not Applicable
Random Forest	50, 100	None, 5	Not Applicable
Gradient Boosting	50, 100	3, 5	0.01, 0.1
Adaptive Boosting	50, 100	Not Applicable	0.01, 0.1

After an exhaustive grid search based on the negative mean square error scoring metric, the best hyperparameters for each ensemble regressor were identified, providing a foundation for subsequent model evaluation.

Model	n_estimators	max_depth	learning_rate
Decision Tree	Not Applicable	None	Not Applicable
Random Forest	100	None	Not Applicable
Gradient Boosting	100	5	0.1
Adaptive Boosting	100	Not Applicable	0.01

**Note:** Ron Kohavi. "A Study of Cross-Validation and Bootstrap for Accuracy Estimation and Model Selection". International Joint Conference on Artificial Intelligence (IJCAI), 14 (2): 1137-43, 1995. <https://www.ijcai.org/Proceedings/95-2/Papers/016.pdf>



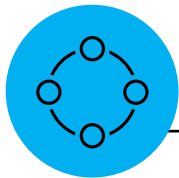
# ANALYZE

## Predictive Modeling: Model Selection based on Optimal Hyperparameters

Following the hyperparameter tuning, the models underwent rigorous evaluation using a 10-fold cross-validation approach. The root mean squared error (RMSE) was employed as a key metric to assess the predictive performance of each model. The RMSE values give an indication of how well each model is performing in terms of predicting the target variable. The lower the RMSE, the better the model's predictions align with the actual values

Model	Root Mean Square Error	Standard Deviation
Decision Tree	0.0009674833109087932	0.0005208617581119908
Random Forest	0.0008442124556278822	0.0005500335117800331
Gradient Boosting	0.005899866091907829	0.0002649940076146541
Adaptive Boosting	0.014027114258543435	0.0003043495517493041

**Observation:** Random Forest exhibits the lowest RMSE and standard deviation compared to the other two models, suggesting superior performance in our evaluation.



# ANALYZE

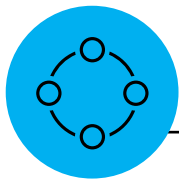
## Predictive Modeling: Performance Evaluation of the Model

The optimal model was then trained on the entire 100% of the training data. Subsequently, the model underwent evaluation on the reserved holdout set to assess its performance. Mean Squared Error (MSE), Mean Absolute Error (MAE) and coefficient of determination (R2) metrics were employed to evaluate the Random Forest Regressor's performance.

Performance Metrics	Training Data	Holdout Data
Mean Squared Error	0.0000002354	0.0000004056
Mean Absolute Error	0.0000318994	0.0000565263
Coefficient of Determination	0.9998815325	0.9997456078

The standard error of the predicted values is **0.00028**, which indicates that predicted values, on the average, are closer to the true values.

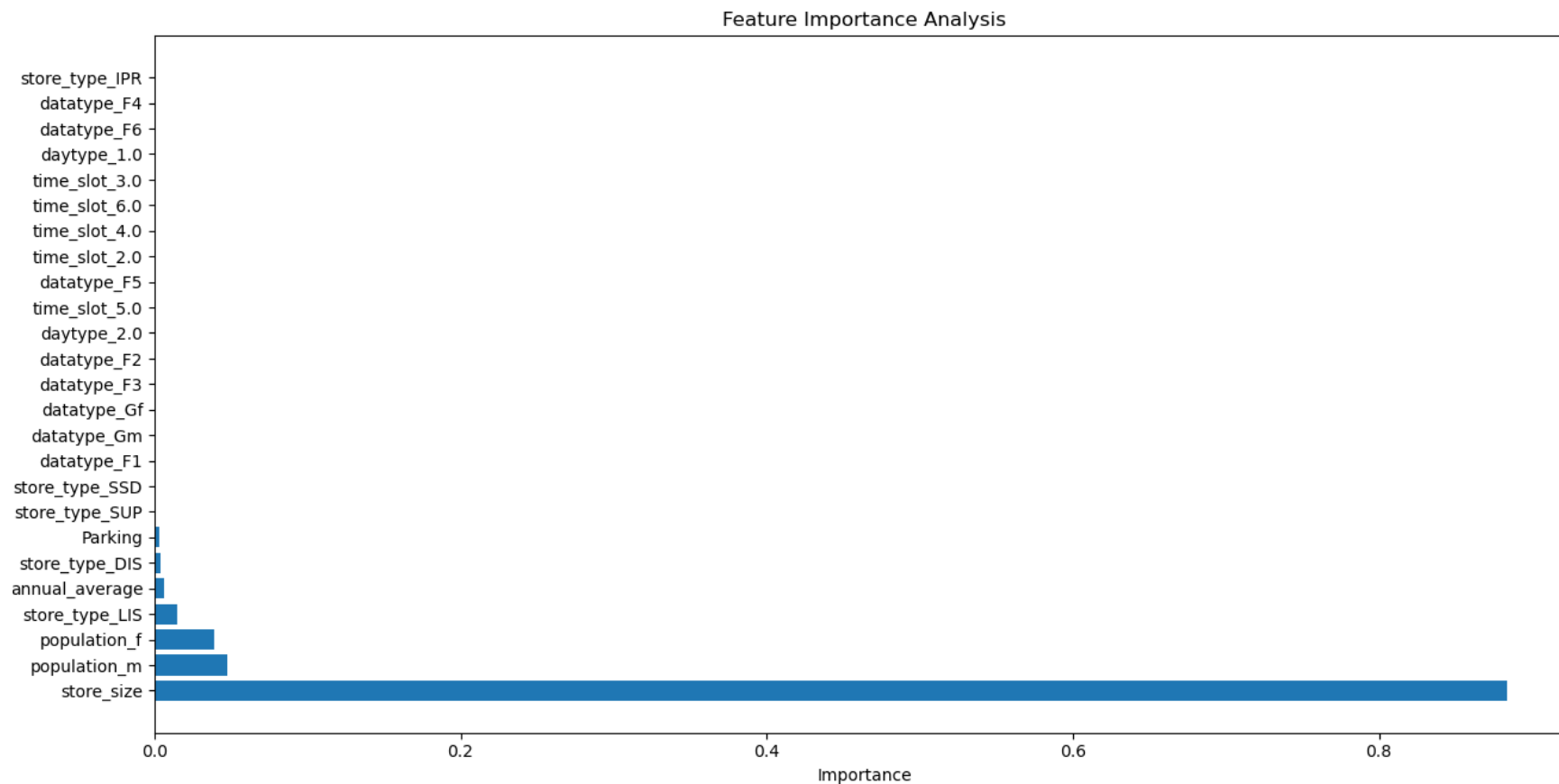
**Observation:** The Mean Squared Error (MSE) and Mean Absolute Error (MAE) values for both sets are quite low, suggesting that the model is making accurate predictions with both large and small errors respectively. The R2 values for both the training and holdout sets are very high (close to 1), indicating that the model is explaining a significant amount of variance in both datasets. It is a measure of goodness of fit.



# ANALYZE

## Predictive Modeling: Feature Importance Analysis

It is unsurprising that store size significantly influences the decision-making process of the Random Forest Regressor in predicting potential values.





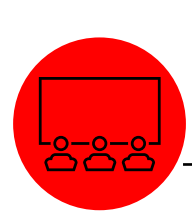
### **With respect to existing customers: these observations can help with customer retention**

- Bigger stores tend to have more potential for drawing in customers and generating sales.
- Stores with parking spaces tend to have higher potential values.
- Hypermarkets tend to show higher potential values.
- 80% of the combined potential is being generated by 20% (373) of the stores.
- Hyperstores, which make up less than 20% of the store types, generate more than 80% of the combined potential.

### **With respect to new customers: these observations can help with customer acquisition**

- Population is likely to gravitate more during weekends.
- Population is likely to gravitate more during 14 pm – 17 pm and 17 pm – 20 pm.
- Population with age groups 41-50 and over 60 years are likely to gravitate more towards stores.
- Males, on average, gravitate more towards stores.

**Note:** Findings and observations are based on Multivariate analysis, One-Way ANOVA test, Tukey HSD Test, Correlation analysis, Temporal analysis, Demographic trend analysis, Pareto analysis, and Feature Importance Analysis.



# ACT

## Recommendations

- ***Strategic Marketing Focus:***
  - Allocate marketing resources to prioritize hypermarkets and larger stores, given their higher potential.
  - Tailor marketing campaigns to emphasize the unique offerings of hypermarkets.
- ***Peak Hour Promotions:***
  - Schedule promotions during peak evening hours (17:00–20:00) to capitalize on heightened customer gravitation.
- ***Demographic Targeting:***
  - Design targeted campaigns for age groups 41–50 and those over 61, highlighting diaper options for both children and adults.
  - Craft marketing materials specifically designed to appeal to male customers, acknowledging their higher average gravitation towards stores. Highlight the features and benefits of diapers suitable for men, ensuring inclusivity in the product messaging.
- ***Parking Facility Emphasis:***
  - Emphasize and promote stores with parking facilities to leverage the positive correlation with potential.

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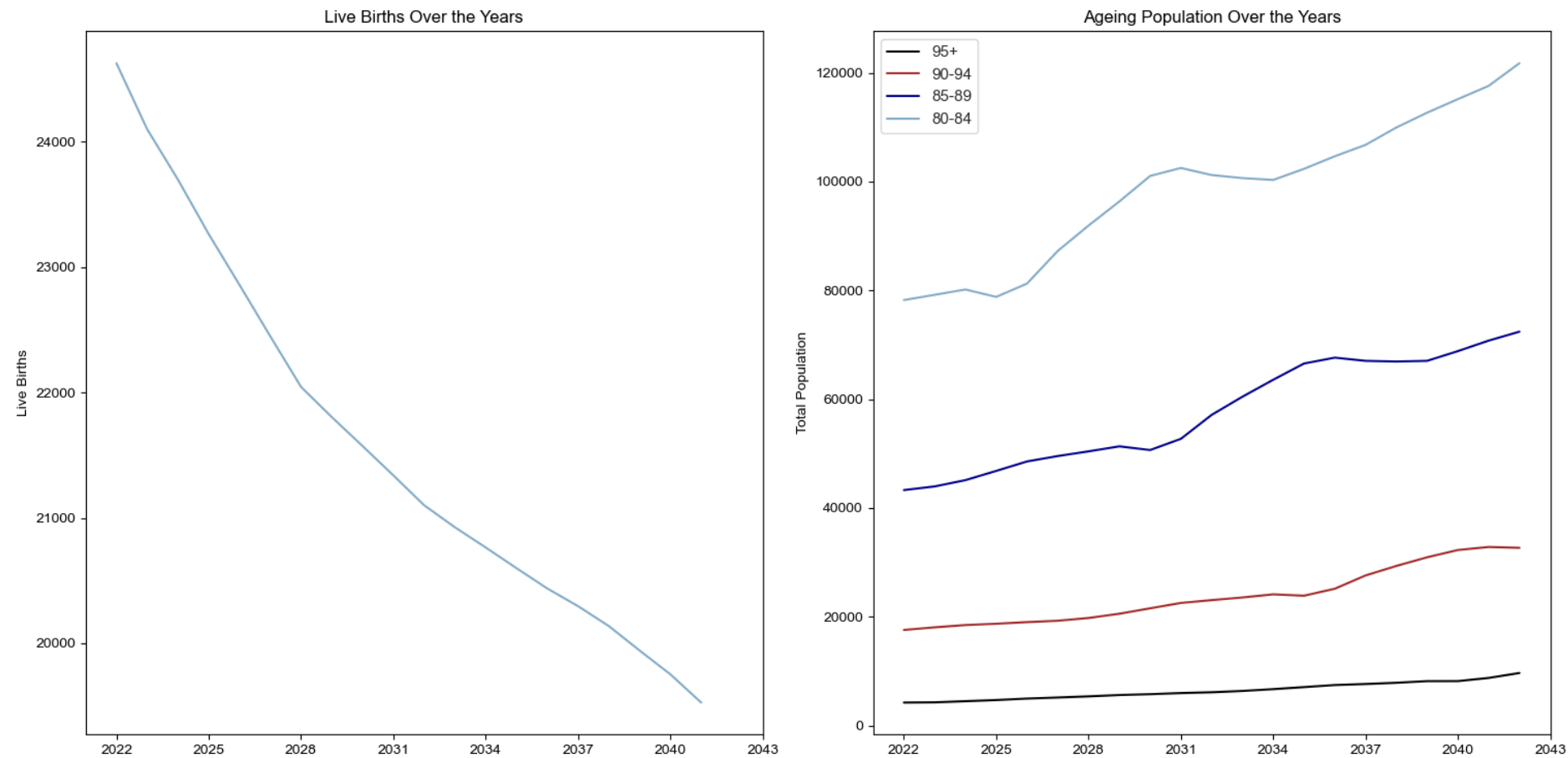
**Note:** The strategies will contribute not only to the retention of existing customers but also to the acquisition of new customers, thereby increasing the store's potential for the diaper product in Naples.





# COMPLIMENTARY

## Population Dynamics of Naples up till 2043



Source: The National Institute of Statistics

**Observation:** The dynamics present a shift in the population landscape of Naples.



# COMPLIMENTARY

## Population and Household Projections for South Italy

### Couples with Children



A decline of more than seven percentage points in couples with children, from 36.1 percent in 2022 to 28.5 percent in 2042.

### Couples with "Young" Children



Couples with at least one child under 20 years are projected to decrease by about seven percentage points.

### Single Persons



Single persons are expected to grow more rapidly than the national average, reaching 35 percent in 2042, starting from 30.3 percent.

### Childless Couples



Childless couples will increase from 17.9 percent to 19.5 percent

### Lone Parents' Presence



Lone parents' presence will increase to 13.3 percent in 2042.

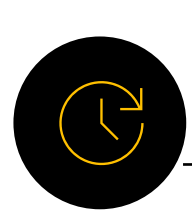
### Average Family Size



The average family size is expected to decrease from 2.44 components in 2022 to 2.18 components in 2042.

Source: The National Institute of Statistics

Observation:



# COMPLIMENTARY

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## Strategies

- ***Diversification of Product Line:***
    - Introduce a wider range of diaper products catering to different age groups, including toddlers and preschoolers.
  - ***Bulk Discount:***
    - Offer discounts for bulk purchases to appeal to caretakers and family members buying for elderly relatives.
  - ***Create a Referral Program:***
    - Establish a referral program that incentivizes healthcare professionals to recommend your brand.
  - **Urinary Incontinence Awareness Campaign:**
    - A comprehensive TV, radio, and print campaign to destigmatize urinary incontinence, using engaging stories and expert interviews to encourage open conversations and promote Fater's commitment to community well-being.
-

# **ADDENDUM**



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
1	198	DECO' MARKET	VIA GIOVANNI DE FRAJA 32/40	POZZUOLI	FALSE	LIS
2	1933	CARREFOUR MARKET	VIA PLINIO - SS 18 KM 24.1	POMPEI	FALSE	SUP
3	1936	SOLE365	VIALE EUROPA 160	CASTELLAMMARE DI STABIA	TRUE	SUP
4	1941	CONAD	PIAZZA MERCATO 34	PIANO DI SORRENTO	FALSE	SUP
5	1943	DECO' SUPERMERCATI	CORSO ITALIA 221	SORRENTO	FALSE	SUP
6	1948	DOK	CORSO RIZZOLI 8	LACCO AMENO	TRUE	SUP
7	1949	DOK	VIA DELLE TERME 52	ISCHIA	TRUE	SUP
8	1950	SISA	VIA ANFITEATRO 1	POZZUOLI	TRUE	SUP
9	1951	EUROESSE	VIA G JANNELLI 190	NAPOLI	TRUE	SUP
10	1954	CARREFOUR MARKET	VIA GIOCHI DEL MEDITERRANEO	NAPOLI	FALSE	SUP
11	1955	CARREFOUR MARKET	CORSO EUROPA	NAPOLI	FALSE	SUP
12	1956	CARREFOUR MARKET	VIA RAFFAELE MORGHEN 28/30	NAPOLI	FALSE	SUP
13	2305	SEBON	VIA OASI DEL SACRO CUORE 121	GIUGLIANO IN CAMPANIA	TRUE	SUP
14	3027	DOK	VIA CASA FIORENTINO 9	FORIO	FALSE	SUP
15	3269	SOLE365	VIALE CAMPANIA 21	TORRE DEL GRECO	TRUE	SUP
16	3283	SOLE365	VIA LEPANTO 55/65	NAPOLI	TRUE	SUP
17	3548	SEBON	VIA ARCORA 100	CASALNUOVO DI NAPOLI	FALSE	SUP
18	3590	CONAD	VIA LAGO PATRIA 144	GIUGLIANO IN CAMPANIA	FALSE	SUP
19	3805	ENNESI	VIA CARUSO SETTIMIO SEVERO 4/8	NAPOLI	FALSE	SUP
20	3842	MAXI SIDIS	VIA SAN LEONARDO 50	OTTAVIANO	TRUE	SUP



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
21	3894	SAPORI & DINTORNI	CORSO ARNALDO LUCCI 156	NAPOLI	FALSE	SUP
22	3901	DODECA	VIA DANTE ALIGHIERI 4	QUARTO	TRUE	SUP
23	3909	CONAD	PIAZZA GUGLIELMO MARCONI 9	GRAGNANO	FALSE	SUP
24	3957	SP SUPERMERCATI PICCOLO	SDA PROV NOLA CICCIANO 41	CAMPOSANO	TRUE	SUP
25	3965	DECO' SUPERMERCATI	VIA CUPA CATENA 66	NAPOLI	TRUE	SUP
26	4106	SOLE365	VIA LIBERTA' II TRAV SX 7/9	PORTICI	FALSE	SUP
27	4159	CONAD SUPERSTORE	SDA STATALE SANNITICA 87 KM 8	CASORIA	TRUE	SUP
28	4162	CONAD	VIA ALLOCCA 2	SOMMA VESUVIANA	TRUE	SUP
29	4168	DODECA	VIA ARENACCIA 154	NAPOLI	TRUE	SUP
30	4344	DECO' SUPERMERCATI	CORSO ENRICO DE NICOLA 44	TERZIGNO	TRUE	SUP
31	4381	CONAD SUPERSTORE	VIA DEL MACELLO 22	POMPEI	FALSE	SUP
32	4488	CARREFOUR MARKET	VIA ANTONIO SOLARIO 5	NAPOLI	TRUE	SUP
33	4663	SOLE365	VIA DIOCLEZIANO 105	NAPOLI	TRUE	SUP
34	4764	FLOR DO CAFE'	VIA ROMA 41	POZZUOLI	FALSE	LIS
35	4780	DECO' SUPERMERCATI	VIA NUOVA SAN ROCCO 56/A	NAPOLI	FALSE	SUP
36	4785	DECO' MAXISTORE	VIA GIUSTINIANO 150	NAPOLI	TRUE	SUP
37	4876	PENNY	CALATA DI CAPODICHINO 254	NAPOLI	TRUE	DIS
38	4926	CONAD	VIA RAFFAELE BOSCO 51/53	VICO EQUENSE	TRUE	SUP
39	5031	SOLE365	VIA EDUARDO NICOLARDI 132	NAPOLI	TRUE	SUP
40	5047	CONAD	VIA TERRACCIANO 11	POZZUOLI	TRUE	SUP





# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
41	5164	DECO' SUPERMERCATI	VIA ASCANIO 19	NAPOLI	FALSE	SUP
42	5222	CONAD	VIA BRACCO 4	NAPOLI	FALSE	SUP
43	5318	SIGMA	VICO PRIMO DEI LIGUORI 6/7	NAPOLI	FALSE	LIS
44	5428	N. D.	VIA MONTEVERGINE 5A/9B	NAPOLI	FALSE	SUP
45	5614	DECO' SUPERMERCATI	VIA SAN FRANCESCO D'ASSISI 72	MARIGLIANO	TRUE	LIS
46	5712	SEBON	VIA VINCENZO DI MEGLIO 119	BARANO D'ISCHIA	FALSE	SUP
47	5719	SUPERO'	VIA PROVINCIALE MARINA GRANDE 73	CAPRI	FALSE	SUP
48	5734	DECO' SUPERMERCATI	VIA DELLA RESISTENZA 88	VILLARICCA	FALSE	SUP
49	5983	DECO' SUPERMERCATI	VIA CIRCUMVALLAZIONE 155	PALMA CAMPANIA	TRUE	LIS
50	6010	CONAD	VIALE COLLI AMINEI 365	NAPOLI	FALSE	SUP
51	6423	SISA	VIA PRINCIPE DI PIEMONTE 66C	CASORIA	TRUE	SUP
52	6652	CONAD	VIA NAZIONALE DELLE PUGLIE	CIMITILE	TRUE	SUP
53	6656	CONAD	VIA COMUNALE VECCHIA 6 I TRAVERSA	NAPOLI	FALSE	SUP
54	6804	EUROSPAR	VIA R. ANNECCHINO 244	POZZUOLI	TRUE	SUP
55	6966	CARREFOUR MARKET	VIA FRANCESCO LOMONACO 5	NAPOLI	FALSE	SUP
56	6980	DECO' SUPERMERCATI	VIA VERGA 6	QUARTO	TRUE	SUP
57	6993	SUPERO'	VIA MELLONI MACEDONIO 110/114	NAPOLI	FALSE	LIS
58	7000	CONAD	VIA ANIELLO FALCONE 380	NAPOLI	FALSE	LIS
59	7028	CONAD SUPERSTORE	CORSO ITALIA 126	ACERRA	TRUE	SUP
60	7161	AUCHAN	VIA SAN FRANCESCO A PATRIA	GIUGLIANO IN CAMPANIA	TRUE	IPR



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
61	7269	DECO' SUPERMERCATI	VIA NUOVA TOSCANELLA 58	NAPOLI	TRUE	SUP
62	7282	SP SUPERMERCATI PICCOLO	VIA MARCONI 9	MARIGLIANELLA	TRUE	SUP
63	7456	DECO' SUPERSTORE	VIA POMIGLIANO D'ARCO 123	SANT'ANASTASIA	TRUE	SUP
64	7508	EUROSPAR	VIA GIOVANNI IERVOLINO 323/329	POGGIOMARINO	TRUE	SUP
65	7734	DOK	VIA DOMITIANA 90 KM 55.269	POZZUOLI	TRUE	SUP
66	7757	DECO' SUPERMERCATI	VIA ANTONINO PIO 10	POZZUOLI	TRUE	SUP
67	7815	IPERCOOP	VIA MASULLO 76	QUARTO	TRUE	IPR
68	7816	AUCHAN	VIA BOSCOFANGONE	NOLA	TRUE	IPR
69	8010	CARREFOUR MARKET	VIA VENIERO 42	NAPOLI	FALSE	SUP
70	8075	DECO' SUPERMERCATI	VIA GIOVANNI XXIII 51	TORRE DEL GRECO	TRUE	SUP
71	8076	DECO' SUPERMERCATI	VIA SERVIO TULLIO 54	NAPOLI	FALSE	LIS
72	8264	SOLE365	VIALE DEI PINI 13/15	NAPOLI	FALSE	SUP
73	8276	DECO' MAXISTORE	1 TRAVERSA II NICOLANGELO PROTOPISANI	NAPOLI	TRUE	SUP
74	8307	AMODIO	VIA TIBERIO 59B	NAPOLI	FALSE	LIS
75	8358	INTERSPAR	VIA PONTECITRA 72	MARIGLIANO	TRUE	SUP
76	8421	CONAD	VIA MONTAGNA SPACCATA 256	NAPOLI	FALSE	LIS
77	8439	SOLE365	VIA DELL'EPOMEIO 61/63	NAPOLI	FALSE	SUP
78	8458	SUPERO'	VIA CINTHIA PARCO SAN PAOLO 21/23	NAPOLI	FALSE	LIS
79	8568	DECO' SUPERMERCATI	VIA GIUSEPPE PAGANO 110	POZZUOLI	FALSE	SUP
80	8704	SP SUPERMERCATI PICCOLO	VIA SACCACCIO 9	NOLA	TRUE	SUP



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
81	8719	SOLE365	VIA ARGINE 380	NAPOLI	TRUE	IPR
82	8780	LIDL	VIA PIETRO NENNI 59	MUGNANO DI NAPOLI	TRUE	DIS
83	8866	CONAD	VIA ALFREDO PECCHIA 160	ARZANO	TRUE	SUP
84	8935	SIGMA	VIA CATENA 21	NAPOLI	TRUE	SUP
85	9104	ETE'	VIA GIOVANNI IERVOLINO 80	POGGIOMARINO	TRUE	SUP
86	9605	SISA	CORSO UMBERTO I 204	TORRE ANNUNZIATA	TRUE	SUP
87	9678	EUROESSE	CORSO UMBERTO I 123	SAN GIORGIO A CREMANO	TRUE	SUP
88	10137	DECO' SUPERMERCATI	VIA CUMANA 19	CASAMICCIOLA TERME	TRUE	SUP
89	10144	DECO' SUPERMERCATI	VIA RIPUARIA 98 BIS	GIUGLIANO IN CAMPANIA	TRUE	SUP
90	10186	SOLE365	VIA SAN DONATO III TRAVERSA 95 PALAZZO M	NAPOLI	TRUE	SUP
91	10343	CONAD	VIA GIACOMO MATTEOTTI 100	CICCIANO	TRUE	SUP
92	10356	IPERCOOP	VIA MARZIASEPE 1	AFRAGOLA	TRUE	IPR
93	10387	CONAD	VIA DIOCLEZIANO 470	NAPOLI	FALSE	LIS
94	10428	CONAD	VIA CAMILLO CUCCIA 55	BRUSCIANO	TRUE	SUP
95	10742	SOLE365	VIA FIGLIOLA 40	SAN SEBASTIANO AL VESUVIO	TRUE	SUP
96	10989	FAMILA SUPERSTORE	SP PIANURA STAB 13	POZZUOLI	TRUE	SUP
97	10992	N. D.	VIA NAPOLI 107	NAPOLI	FALSE	SUP
98	10993	DECO' SUPERMERCATI	VIA TAVERNANOVA 79	CICCIANO	TRUE	SUP
99	50236	SEBON	VIA SONNAMBULA 28	CAIVANO	TRUE	SUP
100	11350	CONAD	VIA SCAFATI 338	SANT'ANTONIO ABATE	FALSE	SUP



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
101	11412	AUCHAN	SDA STATALE 145 3	POMPEI	TRUE	IPR
102	11626	AUCHAN	VIA PIETRO NENNI 54	MUGNANO DI NAPOLI	TRUE	IPR
103	11823	DECO' SUPERMERCATI	VIA SANTA CROCE 98	GRAGNANO	TRUE	SUP
104	11829	SP SUPERMERCATI PICCOLO	VIA SANTORELLI 27	NOLA	FALSE	SUP
105	11830	EUROESSE	VIA GIANTURCO 40	PORTICI	FALSE	SUP
106	11953	SP SUPERMERCATI PICCOLO	VIA STARZA PICCIOLI 1	SANT'ANASTASIA	TRUE	SUP
107	12011	CONAD	VIA NICOTERA 34/36	VICO EQUENSE	FALSE	SUP
108	50237	DECO' SUPERMERCATI	VIA GAURICO POMPONIO 29/31	NAPOLI	FALSE	SUP
109	12769	DECO' SUPERMERCATI	VIA SEGAETANO 26	QUARTO	TRUE	SUP
110	12963	CONAD	VIA MICHELANGELO LUPOLI 50	FRATTAMAGGIORE	FALSE	SUP
111	12964	DECO' SUPERMERCATI	VIA LUIGI VOLPICELLA 344/A	NAPOLI	FALSE	SUP
112	13067	DOK	VIA LUCA GIORDANO 39	SAN GIORGIO A CREMANO	FALSE	SUP
113	13231	ENNESI	VIA CIRCUMVALLAZIONE ESTERNA 10 I	MELITO DI NAPOLI	TRUE	SUP
114	13232	DECO' SUPERMERCATI	VIA BARTOLO LONGO 298	NAPOLI	TRUE	SUP
115	13233	DECO' SUPERMERCATI	VIA TUFARELLI 78	SAN GIORGIO A CREMANO	TRUE	SUP
116	13234	SOLE365	VIA NAZIONALE 239	TORRE DEL GRECO	TRUE	SUP
117	13643	CONAD	VIA PADRE LUIGI TOSTI 34	NAPOLI	FALSE	SUP
118	13645	MD	VIA LEONARDO BIANCHI 75	NAPOLI	TRUE	DIS
119	13646	DECO' SUPERMERCATI	VIA SIGMUND FREUD 81/89	NAPOLI	TRUE	SUP
120	13649	CONAD	VIA MADONNA DELL'ARCO 66	SANT'ANASTASIA	FALSE	SUP



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
121	13899	EUROESSE	PIAZZA TRIESTE 18	ERCOLANO	TRUE	SUP
122	13900	CONAD	VIA PODERICO 11	NAPOLI	FALSE	SUP
123	13902	N. D.	VIA MONTAGNA SPACCATA 345/347	NAPOLI	FALSE	SUP
124	13963	DECO' MAXISTORE	VIA DUCA DEGLI ABRUZZI 69	BARANO D'ISCHIA	TRUE	SUP
125	14201	DECO' SUPERMERCATI	VIA MONTERONE 31	FORIO	TRUE	SUP
126	14203	DECO' SUPERMERCATI	VIA RAFFAELLI 36	GRAGNANO	FALSE	SUP
127	14244	CRAI	SDA STATALE SANNITICA 87 KM 9	CASORIA	TRUE	SUP
128	14429	EUROSPAR	VIA CUMA 161	BACOLI	TRUE	SUP
129	14430	DECO' SUPERMERCATI	VIA MERCATO DI SABATO 318	BACOLI	TRUE	SUP
130	14435	EUROSPAR	VIA GIOVANNI AMATO 45	CASORIA	TRUE	SUP
131	14437	CONAD	VIA CASTEL BELVEDERE 253/255	MARANO DI NAPOLI	TRUE	SUP
132	14447	DECO' SUPERMERCATI	VIA FONSECA 74/76	NOLA	FALSE	SUP
133	14448	SP SUPERMERCATI PICCOLO	VIA SELVA 14	CASTELLO DI CISTERNA	FALSE	LIS
134	14451	DECO' SUPERMERCATI	VIA MASULLO 65	QUARTO	TRUE	SUP
135	14454	SP SUPERMERCATI PICCOLO	VIA GIOVANNI PRIMICERIO 21	SANT'ANASTASIA	FALSE	SUP
136	14483	SOLE365	VIA DENZA 20	CASTELLAMMARE DI STABIA	FALSE	SUP
137	14544	SOLE365	VIA FONTANA DOMENICO 42/48	NAPOLI	FALSE	SUP
138	14671	DECO' MAXISTORE	VIA REPUBBLICHE MARINARE 222M	NAPOLI	TRUE	SUP
139	14679	DOK	VIA SCIPIONE BRANDOLINI 10	PROCIDA	FALSE	LIS
140	14689	DECO' SUPERMERCATI	VIA SALVATORE DI GIACOMO 18	POZZUOLI	TRUE	LIS



# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
141	14760	DECO' SUPERMERCATI	VIA NAZIONALE 56	TORRE DEL GRECO	TRUE	SUP
142	14944	DECO' SUPERMERCATI	SS DIREZIONE AGEROLA 2	GRAGNANO	TRUE	SUP
143	15059	CONAD	VIA MONTERUSCELLO 31 D	POZZUOLI	TRUE	SUP
144	15061	SEBON	VIA SALVO D'ACQUISTO 20/32	QUARTO	FALSE	LIS
145	15352	CRAI	VIA ORAZIO 145 G	NAPOLI	TRUE	SUP
146	15565	SISA	VIA SAN LEONARDO 180	OTTAVIANO	TRUE	SUP
147	15570	CONAD	VIA ROMA VERSO SCAMPIA 144/D	NAPOLI	TRUE	SUP
148	15572	FLOR DO CAFE'	VIA DI MASSIMO ANNELLA 21/31	NAPOLI	FALSE	SUP
149	15604	N. D.	VIA MARCIOTTI 62	SAN GIUSEPPE VESUVIANO	TRUE	SUP
150	15633	DECO' SUPERMERCATI	VIA BARENTE 11	LACCO AMENO	TRUE	SUP
151	15636	DECO' SUPERMERCATI	VIA CORRADO BUONO 13	BARANO D'ISCHIA	TRUE	LIS
152	15817	SIGMA SUPERSTORE	VIA SAN FRANCESCO D'ASSISI 24	GIUGLIANO IN CAMPANIA	TRUE	SUP
153	15818	N. D.	CUPA STA CESAREA 62	NAPOLI	FALSE	SUP
154	16008	CONAD	VIA DEI CAMPI 6	MASSA LUBRENSE	TRUE	LIS
155	16009	CONAD CITY	VIA NAPOLI 13	VILLARICCA	FALSE	LIS
156	16011	CONAD	VIA SAN DONATO 7	NAPOLI	FALSE	SUP
157	16015	SP SUPERMERCATI PICCOLO	VIA NAZIONALE DELLE PUGLIE 185	SAN VITALIANO	FALSE	SUP
158	16237	CARREFOUR MARKET	VIA CROCE TESTACCIO 21	BARANO D'ISCHIA	FALSE	SUP
159	16250	DECO' SUPERMERCATI	VIA DON MINZONI 35/37	SOMMA VESUVIANA	TRUE	LIS
160	16498	DECO' SUPERMERCATI	VIA MELITO MUGNANO 184	MUGNANO DI NAPOLI	TRUE	SUP



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In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
161	16503	DECO' SUPERMERCATI	VIA FORNILLO 19	POGGIOMARINO	TRUE	SUP
162	16507	ETE'	VIA ENRICO MANFREDI 19	SAVIANO	TRUE	LIS
163	16728	MAXI SIDIS	VIA CORNELIA DEI GRACCHI 8	BACOLI	TRUE	SUP
164	16848	DECO' SUPERSTORE	SDA STATALE 7BIS KM 20.086	MELITO DI NAPOLI	TRUE	SUP
165	17080	CONAD	VIA NAPOLI 217	ARZANO	FALSE	SUP
166	17085	CONAD	VIA CONSALVO 107/E	NAPOLI	TRUE	SUP
167	17359	DODECA	VIA PROVINCIALE MARINA GRANDE 2	CAPRI	TRUE	SUP
168	17360	DECO' SUPERMERCATI	VIA E. P. DE FONSECA 14	GRUMO NEVANO	TRUE	LIS
169	17501	SOLE365	VIA PIETRO CARRESE 20/A	CASTELLAMMARE DI STABIA	FALSE	SUP
170	17583	DECO' SUPERMERCATI	PIAZZA FALCONE E BORSELLINO	POMPEI	TRUE	SUP
171	17793	SIGMA	VIA CIMITERO	NOLA	TRUE	SUP
172	18092	DECO' SUPERMERCATI	VIA ROMA 32 BIS	GRAGNANO	TRUE	SUP
173	18094	SIGMA	VIA ROCCO SCOTELLARO 7/11	NAPOLI	FALSE	SUP
174	18097	SIGMA	VIA PABLO PICASSO 46	NAPOLI	FALSE	SUP
175	18098	DECO' MAXISTORE	VIA BOTTEGHELLE 555	NAPOLI	TRUE	SUP
176	18100	SUPERO'	VICO SAN DOMENICO SORIANO 20	NAPOLI	FALSE	LIS
177	18107	SISA	VIA COL.ALIPERTA 21	SOMMA VESUVIANA	TRUE	SUP
178	18481	SP SUPERMERCATI PICCOLO	VIA DEI TIGLI 19	CASALNUOVO DI NAPOLI	TRUE	LIS
179	18497	SIGMA	VIA PURGATORIO 155	SAN GIUSEPPE VESUVIANO	TRUE	SUP
180	19031	DECO' SUPERMERCATI	VIA STAFFETTA 127	GIUGLIANO IN CAMPANIA	FALSE	SUP



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In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
181	19036	CONAD	PIAZZA GRAVINA 13	PORTICI	FALSE	SUP
182	19037	DODECA	VIA SANTA MARIA A CUBITO 28	QUALIANO	TRUE	SUP
183	19041	SP SUPERMERCATI PICCOLO	VIA LUFRANO 56	VOLLA	TRUE	SUP
184	19158	DECO' SUPERMERCATI	VIA BRAMANTE 28	NAPOLI	TRUE	SUP
185	19167	DECO' SUPERMERCATI	VIA CAVALLO 7	TORRE DEL GRECO	TRUE	SUP
186	19206	DECO' MAXISTORE	VIA MARIO D'AMBRA 30	FORIO	TRUE	SUP
187	19231	DECO' SUPERMERCATI	VIA PARMENIDE 4	NAPOLI	TRUE	SUP
188	19237	DECO' SUPERMERCATI	VIA RAFFAELE BOSCO 146	VICO EQUENSE	TRUE	LIS
189	19790	DECO' SUPERMERCATI	VIA CUPA RUBINACCI 101	NAPOLI	TRUE	LIS
190	19852	DECO' MAXISTORE	VIA SACERDOTE BENEDETTO COZZOLINO 86	ERCOLANO	TRUE	SUP
191	19876	FLOR DO CAFE'	VIA DIOCLEZIANO 52	NAPOLI	FALSE	SUP
192	19946	CONAD SUPERSTORE	VIA CINTIA	NAPOLI	TRUE	SUP
193	20024	SIGMA	VIA GIOBERTI 12	MARANO DI NAPOLI	TRUE	SUP
194	20038	EUROSPIN	VIA IV NOVEMBRE 23	ERCOLANO	FALSE	DIS
195	20100	EUROSPIN	VIA ALFREDO PECCHIA 176	ARZANO	TRUE	DIS
196	20209	DECO' SUPERMERCATI	VIA CALATA CASANOVA 5	NAPOLI	FALSE	SUP
197	20219	EUROSPIN	VIA SANTA MARIA LA NOVA 1	AFRAGOLA	TRUE	DIS
198	20258	EUROSPAR	VIA SELVA	CASTELLO DI CISTERNA	TRUE	SUP
199	20336	N. D.	VIA PROVINCIALE 136	NAPOLI	FALSE	SUP
200	20359	SOLE365	VIA NAPOLI 270	ARZANO	TRUE	SUP





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In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
201	20361	CRAI	VIALE 1 MAGGIO	CARDITO	TRUE	IPR
202	20392	SOLE365	VIA MATTIA PRETI 19	NAPOLI	TRUE	SUP
203	20620	EUROSPIN	VIA PIETRO NENNI 5	MUGNANO DI NAPOLI	TRUE	DIS
204	20623	DECO' SUPERMERCATI	PIAZZA CAVOUR 117	NAPOLI	FALSE	LIS
205	20637	DECO' MAXISTORE	VIA LUCIANO 76	POZZUOLI	TRUE	SUP
206	20672	LIDL	VIA SANTA MARIA LA NOVA	AFRAGOLA	TRUE	DIS
207	20804	SP SUPERMERCATI PICCOLO	VIALE IMPERO 7	CASTELLO DI CISTERNA	FALSE	SUP
208	20874	SEBON	VIA ENRICO COSENZ 13	NAPOLI	FALSE	SUP
209	20934	DESPAR	VIA PIETRO NENNI 4	MUGNANO DI NAPOLI	TRUE	SUP
210	21015	EUROESSE	VIA BENVENUTO CELLINI 19	PORTICI	TRUE	SUP
211	21080	SOLE365	VIA CAMPANA 256	QUARTO	TRUE	SUP
212	21302	SUPERO'	VIA ALESSANDRO LONGO 36/38	NAPOLI	FALSE	SUP
213	21304	SUPERO'	VIA SANTA LUCIA 59/63	NAPOLI	FALSE	LIS
214	21305	SOLE365	VIA A. BALSAMO 8/12	SANT'AGNELLO	TRUE	SUP
215	21389	CRAI	VIA LAGO PATRIA 216	GIUGLIANO IN CAMPANIA	TRUE	SUP
216	21548	DECO' SUPERMERCATI	VIA VOLPICELLI 33	ARZANO	FALSE	LIS
217	21605	SP SUPERMERCATI PICCOLO	VIA NAZIONALE DELLE PUGLIE 155	POMIGLIANO D'ARCO	TRUE	SUP
218	21704	SEBON	VIA CATASTE 40	GIUGLIANO IN CAMPANIA	FALSE	SUP
219	21706	OK SIGMA	CORSO CAMPANO 42/44	MARIGLIANO	FALSE	LIS
220	21817	SUPERFOOD	VIA VICINALE CAMPANILE 156	NAPOLI	TRUE	SUP



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In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
221	21954	ETE'	VIA POGGIOMARINO 37	STRIANO	TRUE	SUP
222	22146	SIGMA SUPERSTORE	CUPA VICINALE SAN SEVERINO 24	NAPOLI	FALSE	SUP
223	22238	DECO' MARKET	VIA SOMMA 74	SANT'ANASTASIA	TRUE	SUP
224	22319	CONAD	CORSO MALTA 83	NAPOLI	TRUE	SUP
225	22320	CONAD SUPERSTORE	SS 7 BIS KM 51.500 66	NOLA	TRUE	SUP
226	22338	N. D.	VIA GIACOMO LEOPARDI 153	NAPOLI	FALSE	SUP
227	22451	DECO' MAXISTORE	VIA MONTEOLIVETO 48/60	VOLLA	TRUE	SUP
228	22594	DECO' SUPERMERCATI	VIA CAMPANA 466	QUALIANO	FALSE	SUP
229	22595	DECO' SUPERMERCATI	VIA COSTANTINOPOLI 138	SOMMA VESUVIANA	TRUE	LIS
230	22596	DECO' SUPERMERCATI	CORSO VITTORIO EMANUELE 75	TORRE DEL GRECO	FALSE	SUP
231	22607	DECO' SUPERMERCATI	VIA SPARTIMENTO 122	SCISCIANO	TRUE	SUP
232	22615	SISA	VIA ALDO MORO 146	SOMMA VESUVIANA	TRUE	SUP
233	22616	DESPAR	VIA ROMA 477/483	MELITO DI NAPOLI	FALSE	SUP
234	22748	SOLE365	CORSO VITTORIO EMANUELE 677	NAPOLI	FALSE	SUP
235	22808	SP SUPERMERCATI PICCOLO	VIA PRINCIPE DI PIEMONTE 62	POMIGLIANO D'ARCO	TRUE	LIS
236	22922	ETE'	VIA SAN GIACOMO 4	VICO EQUENSE	TRUE	LIS
237	23076	LIDL	VIA PADULA	CASORIA	TRUE	DIS
238	23116	DECO' SUPERMERCATI	VIA UMBRIA 8	MELITO DI NAPOLI	TRUE	SUP
239	23117	DECO' SUPERMERCATI	VIA NAZIONALE 900	TORRE DEL GRECO	TRUE	SUP
240	23157	SPAZIO CONAD	VIA MICHELANGELO 80	VOLLA	TRUE	IPR



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
241	23163	PENNY	VIALE GUGLIELMO MARCONI 191	CASAVATORE	TRUE	DIS
242	23206	ETE'	VIA CAVOUR 2/4	CASAVATORE	FALSE	SUP
243	23242	CONAD SUPERSTORE	VIA APPIA KM 18.700	GIUGLIANO IN CAMPANIA	TRUE	SUP
244	23368	SOLE365	VIA CORNELIA DEI GRACCHI 28/B	NAPOLI	FALSE	SUP
245	23369	SOLE365	VIA DOMENICO FONTANA 179	NAPOLI	TRUE	SUP
246	23451	DIMEGLIO	VIA DI CIRILLO 22	CARDITO	FALSE	SUP
247	23524	N. D.	CORSO ALESSANDRO VOLTA 247	TERZIGNO	TRUE	SUP
248	23526	EUROESSE	PIAZZA BRUNELLESCHI 27	PORTICI	TRUE	SUP
249	23622	CONAD CITY	VIA PENTELETE	OTTAVIANO	FALSE	LIS
250	23666	DECO' SUPERMERCATI	VIA BENEVENTO 117	CASALNUOVO DI NAPOLI	TRUE	SUP
251	23809	SOLE365	VIA PADRE MARIO VERGARA 89	FRATTAMAGGIORE	TRUE	SUP
252	24057	SAPORI & DINTORNI	VIA ALABARDIERI 8	NAPOLI	FALSE	SUP
253	24064	LIDL	VIA GIULIANO MUGNANO 137	VILLARICCA	TRUE	DIS
254	24106	CONAD	VIA BRUNO FALCOMATA' 3	NAPOLI	TRUE	SUP
255	24229	PELLICANO	VIA SANDRO PERTINI	CASTELLO DI CISTERNA	TRUE	SUP
256	24237	SOLE365	SP APPIA - C/O GALLERIA COMMERCIALE	SANT'ANTIMO	TRUE	SUP
257	24238	GRAN RISPARMIO SUPER	VIA CROCE GRAGNANO 70	SANT'ANTONIO ABATE	TRUE	SUP
258	24294	SOLE365	VIA INCORONATA 14/16	NAPOLI	FALSE	SUP
259	24298	CONAD SUPERSTORE	VIA GALILEO GALILEI 1/2	MARIGLIANELLA	TRUE	SUP
260	24361	DECO' MAXISTORE	VIA NAZIONALE DELLE PUGLIE 179	CASORIA	TRUE	SUP



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
261	24572	CONAD SUPERSTORE	VIA PAOLO BORSELLINO 150C-D	CASANDRINO	TRUE	SUP
262	24582	CARREFOUR MARKET	VIA GINO DORIA	NAPOLI	TRUE	SUP
263	24585	DESPAR	VIA EUGENIO MONTALE 32	MUGNANO DI NAPOLI	FALSE	SUP
264	24589	N. D.	VIA SALVATI 172	SAN GIUSEPPE VESUVIANO	TRUE	SUP
265	24608	DODECA	VIA RIPUARIA 78	GIUGLIANO IN CAMPANIA	TRUE	SUP
266	24640	DESPAR	CORSO UMBERTO I 150	MARIGLIANO	TRUE	SUP
267	24845	DESPAR	VIA MARANO PIANURA 298	MARANO DI NAPOLI	TRUE	SUP
268	24921	N. D.	VIA SAN GIACOMO DEI CAPRI	NAPOLI	TRUE	SUP
269	25015	LIDL	VIA NAZIONALE DELLE PUGLIE 282	NAPOLI	TRUE	DIS
270	25033	N. D.	CORSO GARIBALDI 372	NAPOLI	FALSE	SUP
271	25223	MD	VIA POMIGLIANO 27/31	SOMMA VESUVIANA	TRUE	DIS
272	25330	DECO' SUPERMERCATI	CORSO ANTONIO CAMPANO 477/481	GIUGLIANO IN CAMPANIA	TRUE	SUP
273	25467	MD	VIA SAN NULLO 64/A	GIUGLIANO IN CAMPANIA	TRUE	DIS
274	25541	SOLE365	VIA RUOPPOLO 93/B	NAPOLI	TRUE	SUP
275	25738	DECO' SUPERMERCATI	VIA SALVATORE NULLO 73B	GIUGLIANO IN CAMPANIA	TRUE	SUP
276	25752	LIDL	VIA PROVINCIALE NOLA-CICCIANO	CAMPOSANO	TRUE	DIS
277	25769	EUROSPIN	VIA NAPOLI	CASTELLAMMARE DI STABIA	TRUE	DIS
278	25871	DECO' SUPERMERCATI	VIA FIUMICELLO A LORETO 7	NAPOLI	TRUE	SUP
279	25873	SIGMA	VIA ABATE DESIDERIO 52	NAPOLI	TRUE	SUP
280	25923	N. D.	VIA MIGUEL CERVANTES DE SAVAEDRA	NAPOLI	FALSE	SUP



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
281	49524	SP SUPERMERCATI PICCOLO	VIA DON PIETRO ORDITURA	CASALNUOVO DI NAPOLI	TRUE	SUP
282	49566	DESPAR	VIA G. COSENZA 83/85	CASTELLAMMARE DI STABIA	FALSE	SUP
283	49578	N. D.	VIA VECCHIA SARNO 57	OTTAVIANO	TRUE	SUP
284	49599	PENNY	VIA ROMA VERSO SCAMPIA 56	NAPOLI	TRUE	DIS
285	49670	CONAD SUPERSTORE	PIAZZA MADONNA DELL'ARCO 12	NAPOLI	TRUE	SUP
286	49779	SIGMA SUPERSTORE	STRADA PROV. FRATTA-GRUMO SANT'ARPINO 2	GRUMO NEVANO	TRUE	SUP
287	49781	LIDL	VIA PIGNA 1	GIUGLIANO IN CAMPANIA	TRUE	DIS
288	49876	ETE'	VIA FERROVIA 66 (669,67 KM)	SAN GENNARO VESUVIANO	TRUE	SUP
289	49894	DECO' SUPERMERCATI	VICO CINQUESANTI 23	NAPOLI	TRUE	SUP
290	50336	DECO' MARKET	VIA ORLANDI 299	ANACAPRI	TRUE	LIS
291	50472	SP SUPERMERCATI PICCOLO	VIA COSTANZI ROMANI	SANT'ANASTASIA	TRUE	SUP
292	50473	CONAD SUPERSTORE	LOCALITA' SAN SALVATORE	CASORIA	TRUE	SUP
293	50500	N. D.	VIA STADERA 138 - CC IL BORGO	NAPOLI	FALSE	SUP
294	50510	ETE'	VIA GENOVA 74	NAPOLI	FALSE	SUP
295	50512	DECO' MAXISTORE	VIA CAVALLEGGERI 24	NAPOLI	TRUE	SUP
296	50526	CONAD	VIA APICELLA 1	POLLENA TROCCHIA	FALSE	SUP
297	50595	DECO' SUPERMERCATI	VIA RIPUARIA 119	GIUGLIANO IN CAMPANIA	TRUE	LIS
298	50597	SOLE365	VIA VOLTE21	GRAGNANO	FALSE	SUP
299	51098	DECO' SUPERMERCATI	VIA MADONNA DELLE GRAZIE 133	GIUGLIANO IN CAMPANIA	FALSE	SUP
300	51155	LIDL	VIA PAOLO BORSELLINO SNC	CASANDRINO	TRUE	DIS



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
301	51156	LIDL	VIA NAPOLI 139	CASTELLAMMARE DI STABIA	TRUE	DIS
302	26009	ACQUA & SAPONE	PIAZZA REPUBBLICA 19/21	PIANO DI SORRENTO	FALSE	SSD
303	26010	ACQUA & SAPONE	VIA LIBERTA' 92	PORTICI	FALSE	SSD
304	26218	ACQUA & SAPONE	VIA COMUNALE MARGHERITA 457	NAPOLI	TRUE	SSD
305	26463	N. D.	VIA ILIONE0 42C	NAPOLI	FALSE	SSD
306	26470	PROSHOP	VIA BELVEDERE 21/23	NAPOLI	FALSE	SSD
307	26477	OPPORTUNITY SHOP	VIA FRANCESCO CRISPI 19	QUARTO	FALSE	SSD
308	26478	PROSHOP	VIA OTTAVIANO 115	SAN GENNARO VESUVIANO	TRUE	SSD
309	51313	PROSHOP	VIA PETRARCA 51/63	NAPOLI	FALSE	SSD
310	26715	ACQUA & SAPONE	CORSO UMBERTO I 504	MARIGLIANO	TRUE	SSD
311	26809	N. D.	VIA PASSANTI 191	SAN GIUSEPPE VESUVIANO	FALSE	SSD
312	26810	MISTER RISPARMIO	CORSO LEONARDO DA VINCI 321/323	TERZIGNO	FALSE	SSD
313	26889	ACQUA & SAPONE	VIA NAZIONALE DELLE PUGLIE 48/56	CIMITILE	FALSE	SSD
314	27009	PROSHOP	VIA CASTELBELVEDERE 134	MARANO DI NAPOLI	TRUE	SSD
315	27010	PROSHOP	VIA EDUARDO NICOLARDI 88	NAPOLI	TRUE	SSD
316	27074	PROSHOP	CORSO GARIBALDI 341	NAPOLI	FALSE	SSD
317	27135	PROSHOP	SDA STATALE SANNITICA 87 KM 9	CASORIA	TRUE	SSD
318	27413	DECO' IGIENE E BELLEZZA	VIA DUCA DEGLI ABRUZZI 69	BARANO D'ISCHIA	FALSE	SSD
319	27450	PROSHOP	VIA ALESSANDRO MANZONI 40	MUGNANO DI NAPOLI	FALSE	SSD
320	27588	PROSHOP	VIA SANTA MARIA A CUBITO 28	QUALIANO	TRUE	SSD



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
321	27872	DECO' IGIENE E BELLEZZA	VIA MONTERONE 8	FORIO	FALSE	SSD
322	28028	ACQUA & SAPONE	CORSO ITALIA 194	PIANO DI SORRENTO	TRUE	SSD
323	51315	PROSHOP	VIA DUCA DEGLI ABRUZZI 77/A	NAPOLI	FALSE	SSD
324	28090	OPPORTUNITY SHOP	VIA TIBERIO 53/57	NAPOLI	FALSE	SSD
325	28091	OPPORTUNITY SHOP	VIA SAN GIACOMO DEI CAPRI 488/C	NAPOLI	FALSE	SSD
326	28100	N. D.	PIAZZA LARGA AL MERCATO 7	NAPOLI	FALSE	SSD
327	28434	PROSHOP	VIA SAN LEONARDO 176	OTTAVIANO	TRUE	SSD
328	28488	OPPORTUNITY SHOP	VIA COMUNALE NAPOLI 113	NAPOLI	FALSE	SSD
329	28489	OPPORTUNITY SHOP	VIA EDUARDO NICOLARDI 13/17	NAPOLI	FALSE	SSD
330	28515	PROSHOP	VIALE LEONARDO DA VINCI 86	PORTICI	FALSE	SSD
331	28544	PROSHOP	CORSO UMBERTO I 365	NAPOLI	FALSE	SSD
332	28657	OPPORTUNITY SHOP	VIALE COLLI AMINEI 171	NAPOLI	FALSE	SSD
333	28709	PROSHOP	VIA ANTONINO PIO 12	POZZUOLI	FALSE	SSD
334	28754	PILATO	VIA RISORGIMENTO 176	BACOLI	TRUE	SSD
335	28800	OPPORTUNITY SHOP	VIA MADONNELLA 8L/K	ACERRA	FALSE	SSD
336	28801	N. D.	CORSO MERIDIONALE 5/7/9	AFRAGOLA	FALSE	SSD
337	28806	OPPORTUNITY SHOP	VIA ARENACCIA 77	NAPOLI	FALSE	SSD
338	28807	AMATO POINT	VIA MARCELLO CASALE DE BUSTIS 10	NAPOLI	TRUE	SSD
339	28809	AMATO POINT	VIA CARELLI 3 A	NAPOLI	FALSE	SSD
340	28818	N. D.	VIA RITUARIA 397/A	GIUGLIANO IN CAMPANIA	TRUE	SSD



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S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
341	28844	TUTTO PER TUTTI	VIA POMIGLIANO D'ARCO	SANT'ANASTASIA	FALSE	SSD
342	49933	N. D.	VIA MANZONI 20	CARDITO	FALSE	SSD
343	28899	UNIVERSO DEL PULITO	VIA BENEDETTO CROCE 50	CASORIA	TRUE	SSD
344	28905	N. D.	VIA MICHELANGELO CICCONE 35	NAPOLI	FALSE	SSD
345	28907	OPPORTUNITY SHOP	VIA DE JACOPO DE GENNARO 50/56	NAPOLI	FALSE	SSD
346	50731	UNIVERSO DEL PULITO	VIA DEGLI ULIVI 34	SAN GIUSEPPE VESUVIANO	FALSE	SSD
347	50732	UNIVERSO DEL PULITO	VIALE EUROPA	TORRE DEL GRECO	TRUE	SSD
348	29009	OPPORTUNITY SHOP	CORSO SECONDIGLIANO 536/538	NAPOLI	FALSE	SSD
349	29010	OPPORTUNITY SHOP	CORSO IV NOVEMBRE 35	NAPOLI	FALSE	SSD
350	29011	OPPORTUNITY SHOP	CORSO SIRENA 277	NAPOLI	FALSE	SSD
351	49937	OPPORTUNITY SHOP	VIA ANTONINO PIO 57	NAPOLI	FALSE	SSD
352	29141	PILATO	VIA MONTE DI DIO 19	NAPOLI	FALSE	SSD
353	29155	PROSHOP	VIA GIARDINI 33A	GIUGLIANO IN CAMPANIA	FALSE	SSD
354	50737	OPPORTUNITY SHOP	VIA GIACOMO MATTEOTTI 22/26	QUARTO	FALSE	SSD
355	29181	PUNTOPI	VIA CARDINALE G.SAN FELICE 23	NAPOLI	FALSE	SSD
356	29182	OPPORTUNITY SHOP	VIA COMUNALE NAPOLI 130/132	NAPOLI	TRUE	SSD
357	50739	PUNTOPI	VIA TRE PONTI 8	POMPEI	TRUE	SSD
358	51320	PUNTOPI	VIA ROSSILLI 136	SAN GIUSEPPE VESUVIANO	TRUE	SSD
359	50741	PUNTOPI	VIA PIGNA 17	CASALNUOVO DI NAPOLI	FALSE	SSD
360	29287	PROSHOP	VIA GIULIO CESARE 405	BACOLI	TRUE	SSD





# List of Top 20% stores that generate 80% of combined potential

In descending order

S. No.	Store ID	Store Name	Address	Comune	Parking	Store Type
361	29288	PROSHOP	VIA VINCENZO MOSCA 25/33	NAPOLI	FALSE	SSD
362	49997	ACQUA & SAPONE	VIA RAFFAELE STASI 40/46	NAPOLI	TRUE	SSD
363	50045	AMATO POINT	VIA FERDINANDO DEL CARRETTO 31	NAPOLI	FALSE	SSD
364	51326	MISTER RISPARMIO	VIA NAZIONALE DELLE PUGLIE 315	POMIGLIANO D'ARCO	TRUE	SSD
365	50197	PROSHOP	VIA NUOVA POGGIOREALE 18	NAPOLI	FALSE	SSD
366	50797	PROSHOP	VIA EMILIO SCAGLIONE 369 A/B/C	NAPOLI	FALSE	SSD
367	50805	IPER MAGAZZINI MAURY'S	STRADA COMUNALE SAN SALVATORE	CASORIA	TRUE	SSD
368	50810	PILATO	VIA TEOFILO PATINI 12-20	NAPOLI	FALSE	SSD
369	50812	OPPORTUNITY SHOP	VIALE NUOVA STAZIONE 6	PORTICI	FALSE	SSD
370	50814	OPPORTUNITY SHOP	VIA PROVINCIALE PANZA 152	FORIO	FALSE	SSD
371	51371	OPPORTUNITY SHOP	VIA SANTA RITA DA CASCIA 3	GIUGLIANO IN CAMPANIA	TRUE	SSD
372	29349	PROSHOP	CORSO UMBERTO I 10	MARANO DI NAPOLI	FALSE	SSD
373	29350	PROSHOP	VIA PAOLO MASCAGNI 21	NAPOLI	FALSE	SSD



# BIBLIOGRAPHY & REFERENCES

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- Alan Agresti, Maria Kateri. “Foundations of Statistics for Data Scientists with R and Python”. CRC Press. 2022.
- Sebastian Raschka, Yuxi (Hayden) Liu, Vahid Mirjalili. “Machine Learning with PyTorch and Scikit-Learn”. Packt Publishing Ltd. 2022.
- Aurélien Géron. “Hands-On Machine Learning with Scikit-Learn & TensorFlow”. O’Reille Media. 2019.



# LIBRARIES & MODULES

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- pandas
- numpy
- seaborn as sns
- matplotlib
- statsmodels.api
- scipy.stats
- matplotlib.colors
- geopandas
- loads from shapely.wkt
- train\_test\_split, cross\_val\_score, KFold, GridSearchCV from sklearn.model\_selection
- RandomForestRegressor, GradientBoostingRegressor, AdaBoostRegressor from sklearn.ensemble
- mean\_absolute\_error, r2\_score from sklearn.metrics