Car Recommender

Determining your car **brand** and **model**

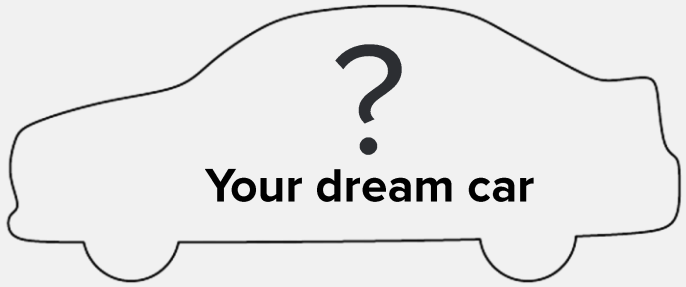
Selecting your car

What brand is interesting for me?

How much will such a car cost?

What is the milage of the car?

What are the prices of the options?



Type

Fuel

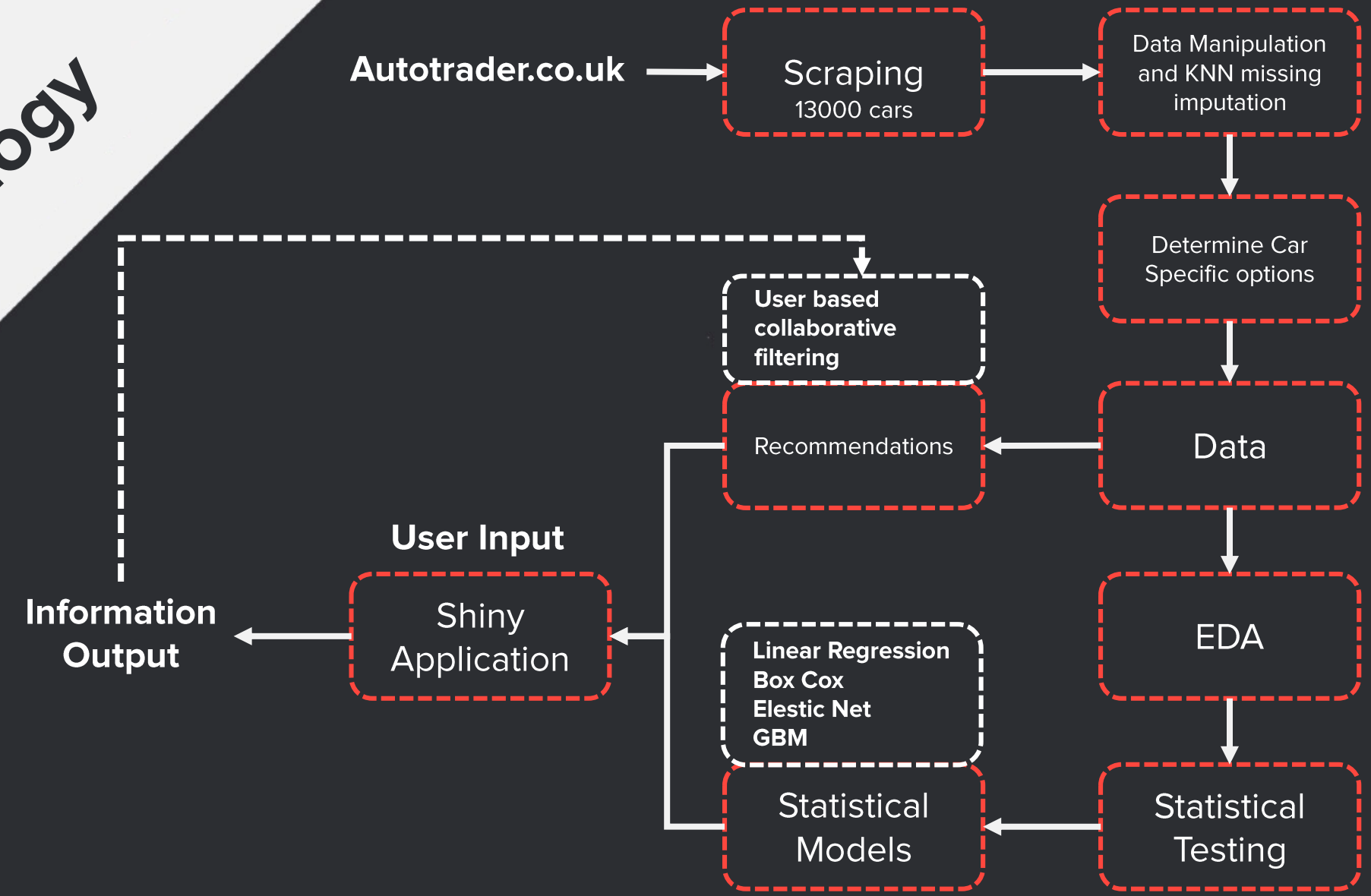
Engine

Transmission

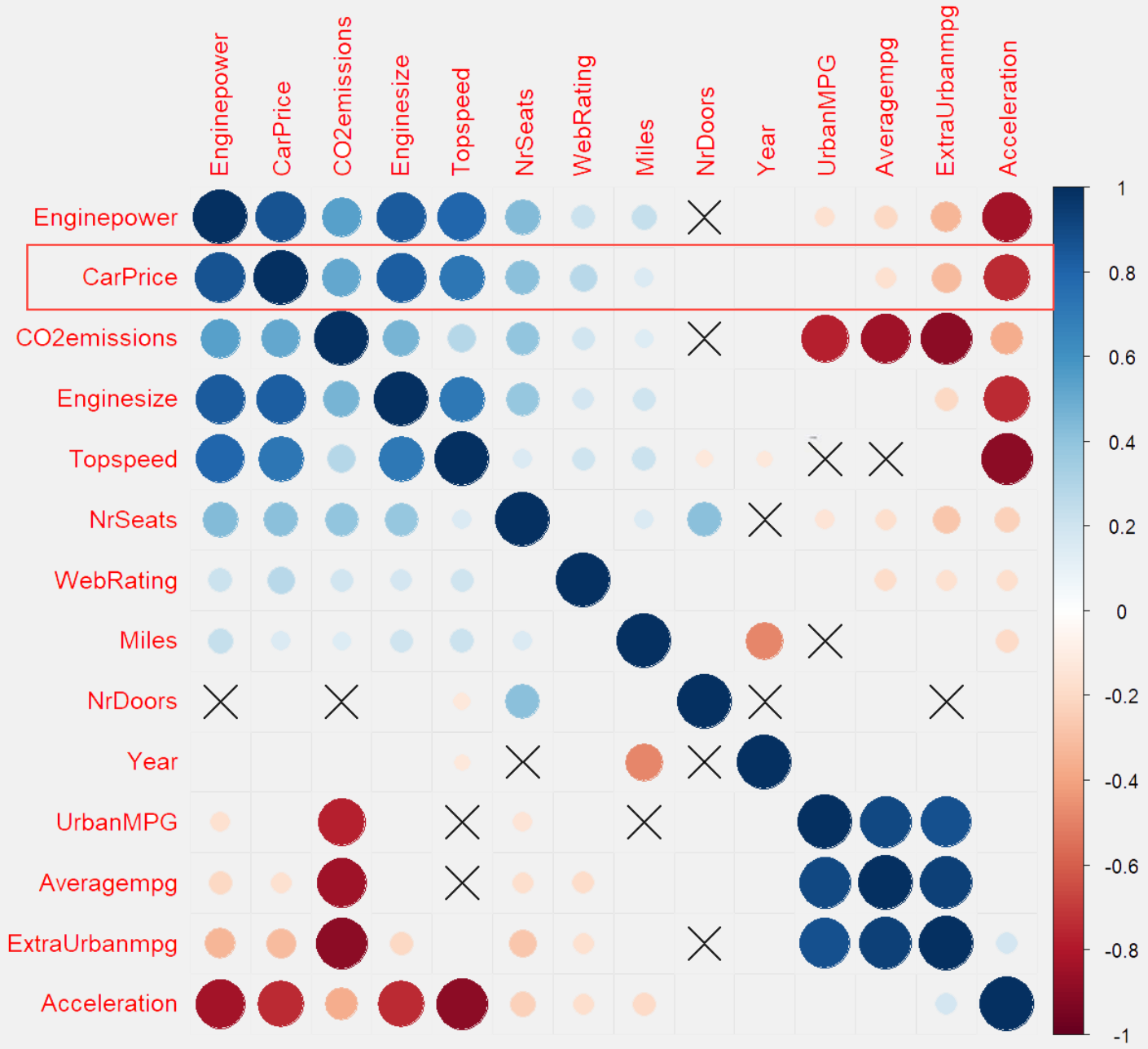
Drive

And many other car features

Methodology



Exploratory Analysis



Machine Learning Models

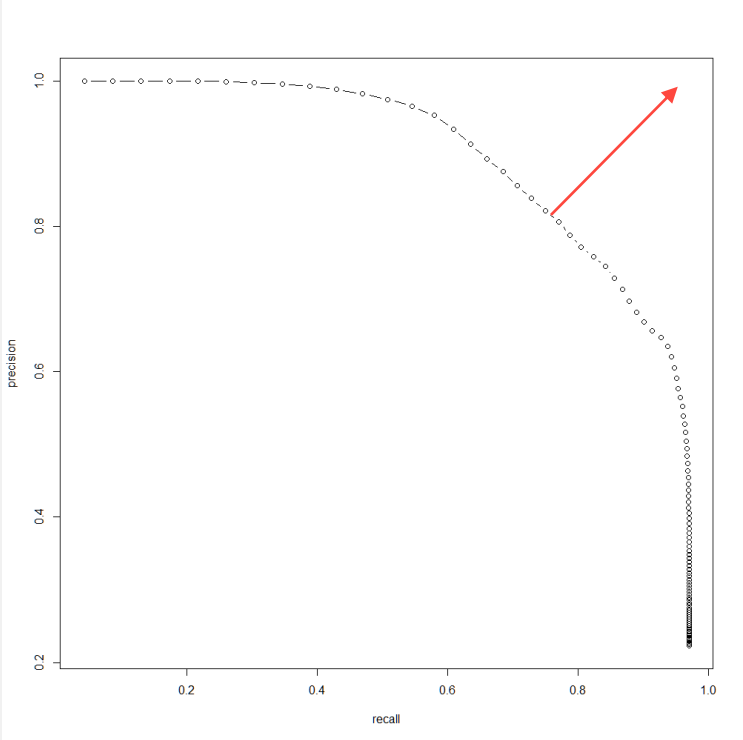
Attempting to predict the car price

		Train R2	Test R2
Linear Regression	Manual	0.90	0.899
	Stepwise	0.914	0.914
	Box Cox	0.900	0.899
Elastic Net		0.916	0.921
Gradient Boosting		0.979	0.957

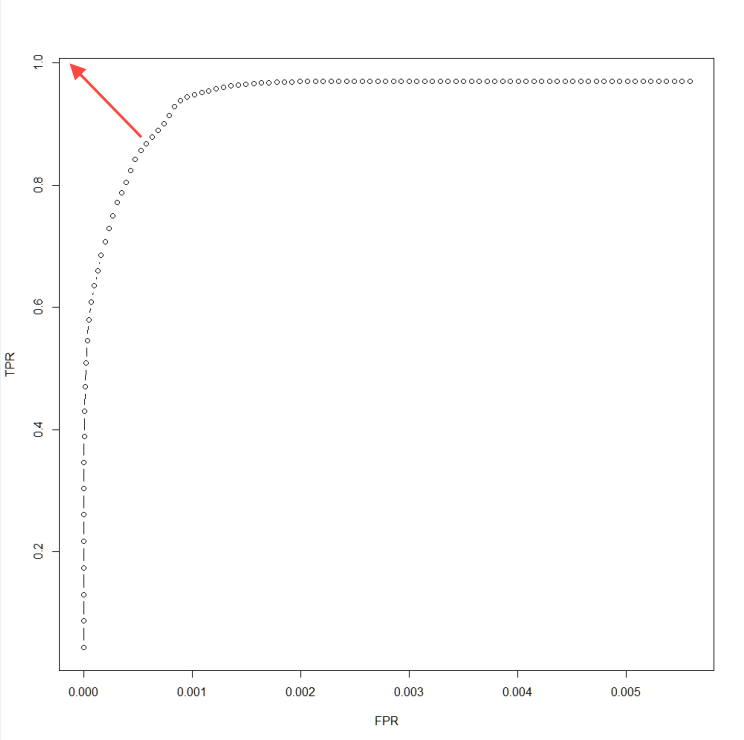
Recommendations

Collaborative Filtering

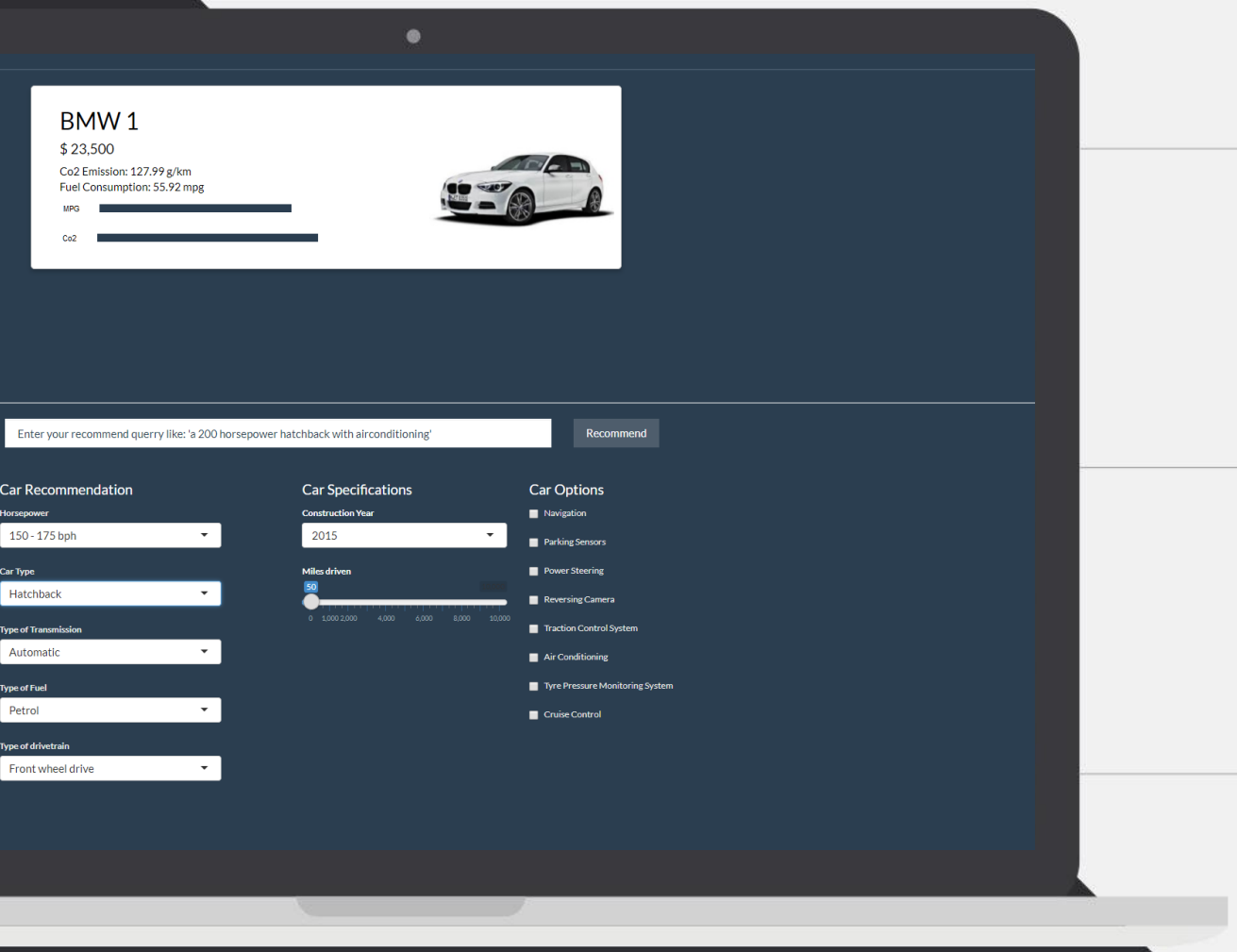
- Collaborative filtering (CF) uses given rating data by many users for many items as the basis for creating a top-N recommendation list.
- The assumption is that users with similar preferences will rate items similarly. Thus missing ratings for a user can be predicted by first finding a neighborhood of similar users and then aggregate the ratings of these users to form a prediction (K nearest neighbors).



High precision (*how useful the search results are*) for high recall (*how complete the results are*)



High number of true positive predictions for a low number of false positive predictions



A

Text interpretation

Recommendation engine based on user based collaborative filtering

Linear Regression models for the prediction of the car price

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