digikalagroup



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Feature	Null Meaning	Zero Meaning	Description
day	No null value	No zero value	The number of days
			passed from the origin
			day. (60 days)
product_id	No null value	No zero value	
cat_name	No null value	No zero value	There are 5 categories
			of products in our data.
leaf_cat_id	No null value	No zero value	Each category has
			multiple leaf categories
live_rate	No null value	No zero value	Day proportion which a
			product is for sale at
			website.
product_sat_score	No one has rated.	No zero value	Users' satisfaction score
			mean between 1 to 5.
product_sat_count	No null value	No one has rated.	Users' satisfaction
			scores count.
amazing_day_rate	There is no Amazing	There is no Amazing	Day proportion which a
	sale.	sale.	product is for Amazing
			sale at website.
amazing_price_segment	There is no Amazing	There is no Amazing	Each segment is for a
	sale.	sale.	price range. It doesn't
			start from zero.
amazing_discount	There is no Amazing	There is no Amazing	Discount value for the
	sale.	sale.	product.
amazing_order_limit	There is no Amazing	No zero value	Limitation on products
	sale.		count which each user
			can buy.
amazing_proposed_stock	There is no Amazing	No zero value	Number of stocks which
	sale.		is proposed to be sold
			on the Amazing.
promotion_day_rate	There is no	There is no	Day proportion which a
	promotion sale.	promotion sale.	product is for promotion
			sale at website.
promotion_price_segment	There is no	There is no	Each segment is for a
	promotion sale.	promotion sale.	price range. It doesn't
			start from zero.
promotion_discount	There is no	There is no	Discount value for the
	Promotion sale.	Promotion sale.	product.
promotion_order_limit	There is no	There is no	Limitation on products
	Promotion sale.	Promotion sale.	count which each user
			can buy.
amazing_order_limit amazing_proposed_stock promotion_day_rate promotion_price_segment promotion_discount	sale. There is no Amazing sale. There is no Amazing sale. There is no promotion sale.	sale. No zero value No zero value There is no promotion sale. There is no promotion sale. There is no Promotion sale. There is no Promotion sale.	product. Limitation on products count which each user can buy. Number of stocks which is proposed to be sold on the Amazing. Day proportion which a product is for promotion sale at website. Each segment is for a price range. It doesn't start from zero. Discount value for the product. Limitation on products count which each user



promotion_proposed_stock	There is no	There is no	Number of stocks which
	Promotion sale.	Promotion sale.	is proposed to be sold
			on the promotion.
comments_counts_7	No one has	There is no zero	Number of users'
	commented.	value.	comments for that
			product in last 7 days.
rec_comments_count_7	No one has	No one has	Number of users'
	recommended.	recommended.	recommendation for
			that product.
dkp_amazing_notif_count_7	No one has asked.	No one has asked.	Number of users' who
			asked for Amazing
			notification for that
			product in last 7 days.
normal_order_limit	There is no normal	There is no normal	Limitation on products
	sale.	sale.	count which each user
			can buy.
normal_price_segment	There is no normal	No zero value	Each segment is for a
	sale.		price range. It doesn't
			start from zero in last 7
			days.
normal_discount	There is no normal	There is no normal	Maybe there is a sale
	sale.	sale.	with discount out of
			promotion.
holiday	No null value	No null value	0.1, 0.2, 1
			There are just 3 values.
warehouse1_share	There is no sale for	There is no sale for	It is a coefficient which
	that warehouse.	that warehouse.	shows the warehouse
			sales share.
warehouse2_share	There is no sale for	There is no sale for	It is a coefficient which
	that warehouse.	that warehouse.	shows the warehouse
			sales share.
amazing_sold_count	Zero sales count.	No zero value	Amazing sold count
promotion_sold_count	Zero sales count.	No zero value	Promotion sold count
normal_sold_count	Zero sales count.	No zero value	Normal sold count

The 60 days sales history data of about 5000 Digikala's products have been proposed (Train Dataset). As it is explained in the table, the data contains 29 columns. One of the classic problems of retail businesses is to predict the future daily sales for each product.

You are asked to design and implement a machine learning model which predicts the next 30 days' daily sales count of each product for Amazing, promotion, and Normal sales based on the previous 30 days' sales history data. Also, we want you to predict two warehouses share coefficient which specifies each warehouse sales count. (Predict red cells)

As the final answer, you have to run your model for about 2040 products (Test Dataset) to predict their next 30 days daily sales count (Amazing, promotion, Normal) and the warehouse's share coefficient based on their previous 30 days sales history data. Your final answer should be a CSV file

that just contains 'day' (31 to 60), 'product_id', 'warehouse1_share', 'warehouse2_share', 'amazing_sold_count', 'promotion_sold_count', 'normal_sold_count'. It will check with a machine, so mind the structure (Fill –1 values).