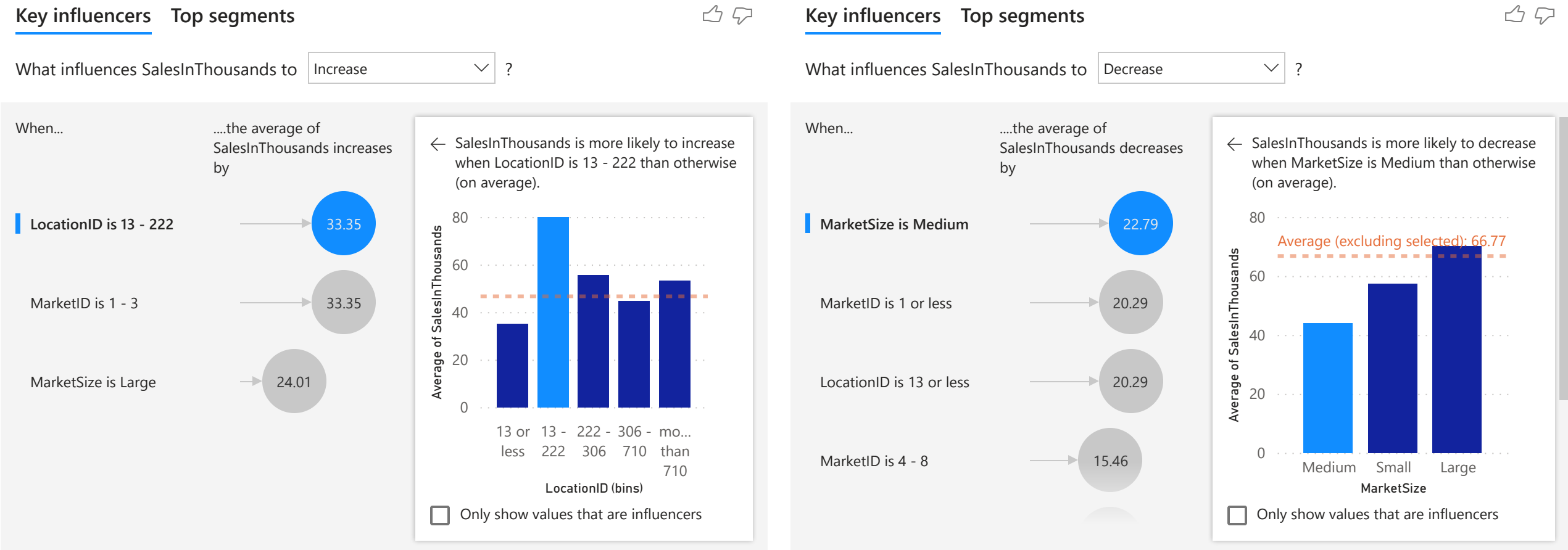


Fast Food Marketing Campaign



A fast food chain carried out a marketing campaign A/B Test in which three promotions were tested.

A Key Influencers Test was performed as an exploratory data check prior to the full investigation.



The **biggest key influencers** that increase average of Sales In Thousands are **Location ID is from 13 - 222** and **Market ID is from 1 -3** and **Market Size is Large**.

The **biggest key influencers** that decrease average of Sales In Thousands are **Market Size is Medium** and **Market ID <= 1** and **Location ID <= 13**.

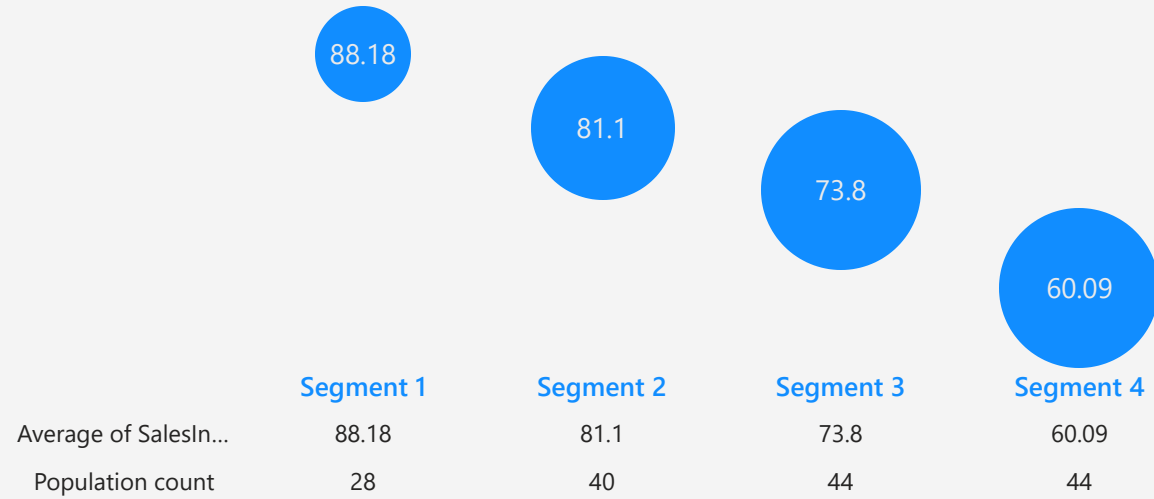
The **Age of Stores** is not a significant **key influencer**.

Key influencers Top segments



When is SalesInThousands more likely to be ?

We found 4 segments and ranked them by Average of SalesInThousands and popu...



The **top segments** when Sales In Thousands are more likely to be high are:

1. **Age of Store is ≤ 3 and Location ID from 14 - 222.**
2. **Age of Store is > 3 and Location ID from 14 - 222 and Promotion $\neq 3$.**
3. **Age of Store is > 3 and Location ID from 14 - 222 and Promotion = 3.**
4. **Age of Store is ≤ 13 or > 222 and Market Size is not Medium and Promotion is 1.**

The **top segments** when Sales In Thousands are more likely to be low are:

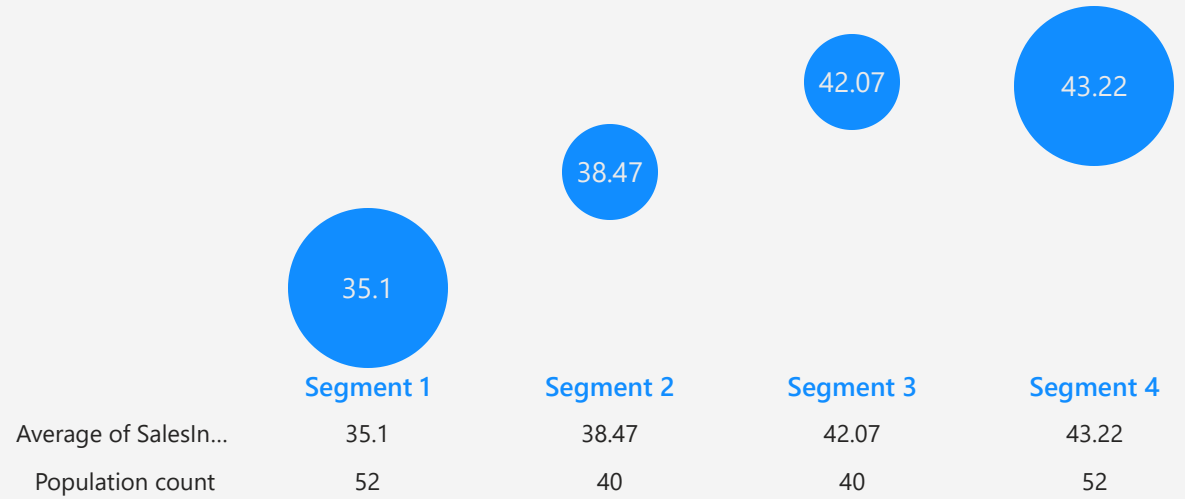
1. **Location ID is ≤ 13 and Market Size is Medium.**
2. **Age of Store is from 4 - 18 and Location ID is from 223 - 710 and Market Size is Medium and Promotion is 2.**
3. **Age of Store is ≤ 3 or > 18 and Location ID is from 223 - 710 and Market Size is Medium and Promotion is 2.**
4. **Age of Store is from 4 - 18 and Location ID is from 223 - 710 and Market Size is Medium and Promotion is 3.**

Key influencers Top segments



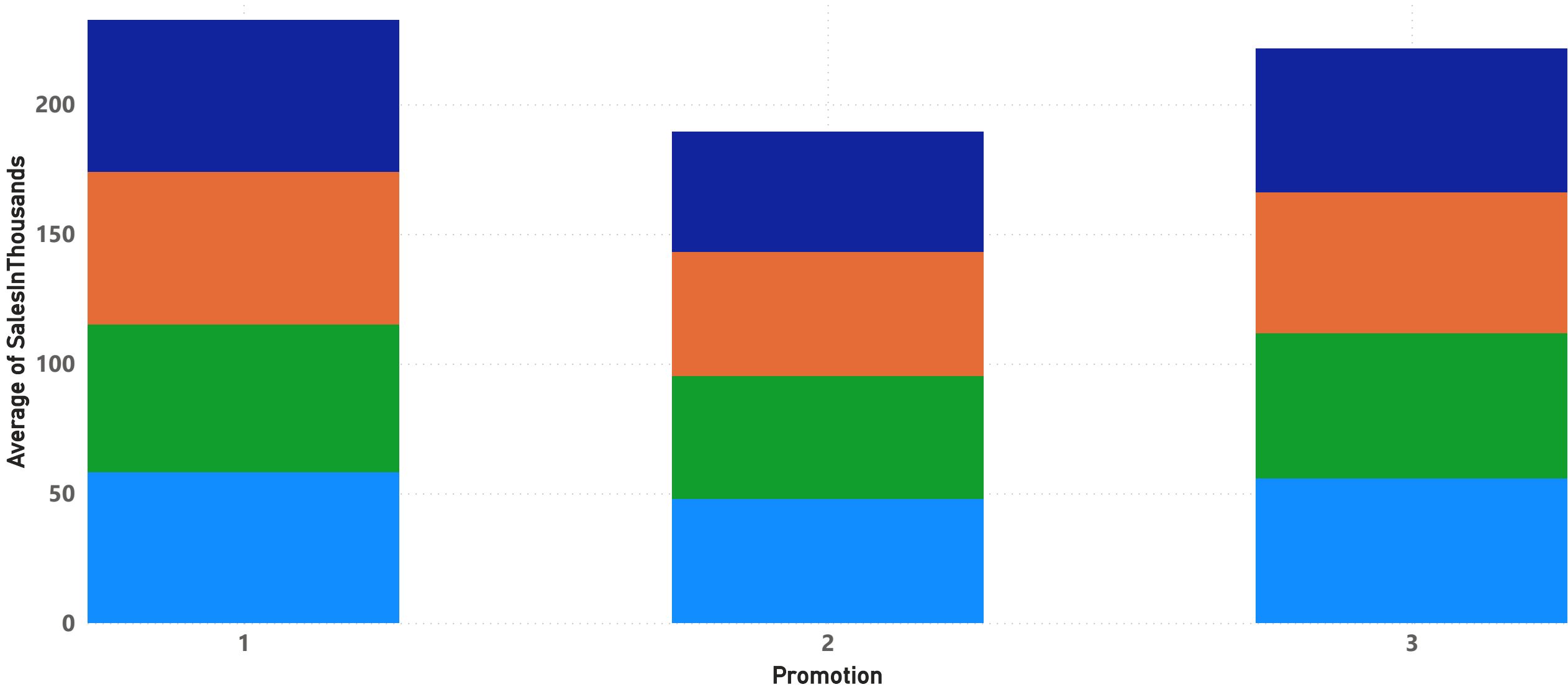
When is SalesInThousands more likely to be ?

We found 4 segments and ranked them by Average of SalesInThousands and popu...



Average of SalesInThousands by Promotion and week

week 1 2 3 4

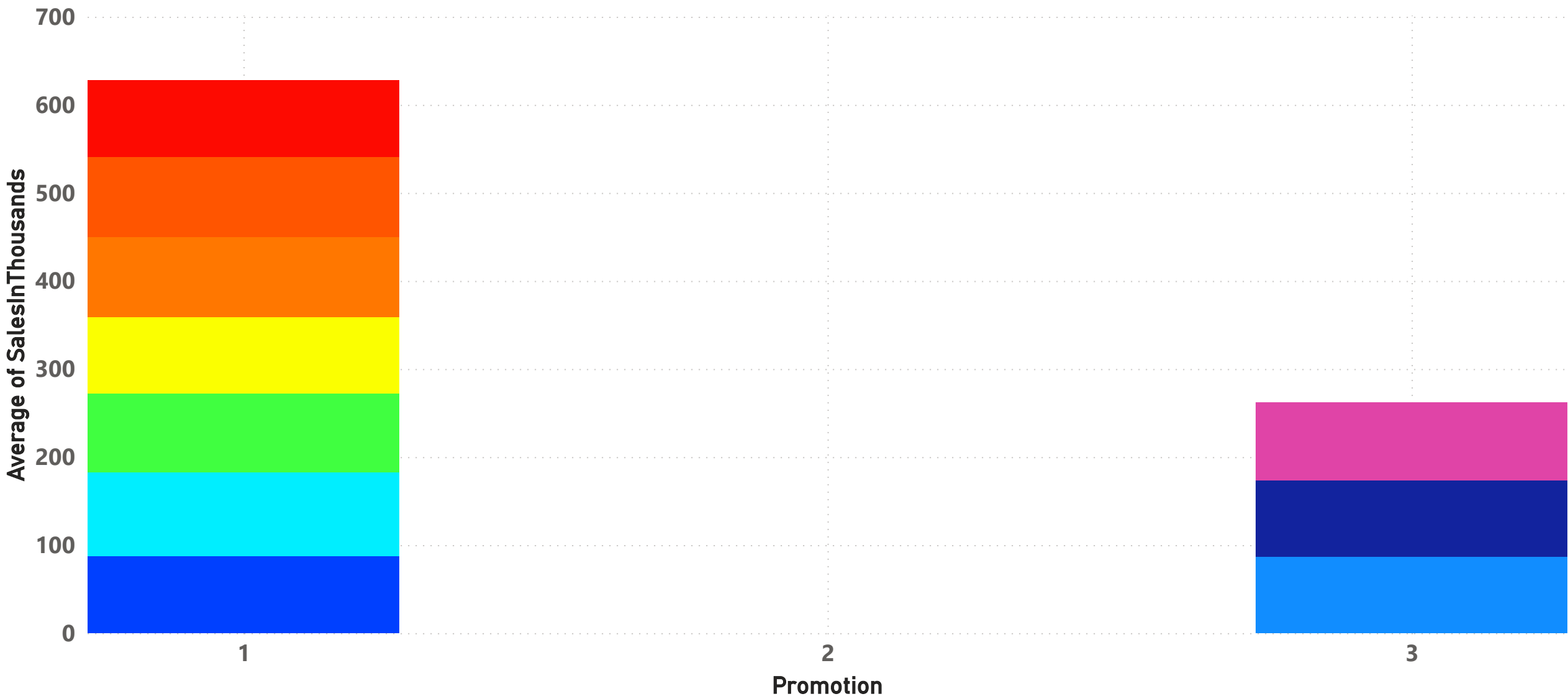


Promotion 1 is the most effective across all weeks by Average of Sales in Thousands (**Promotion 3** is almost as effective).

Promotion 2 is the least effective across all weeks by Average of Sales in Thousands.

Average of SalesInThousands by Promotion and LocationID

LocationID 202 205 207 208 209 210 214 218 220 222

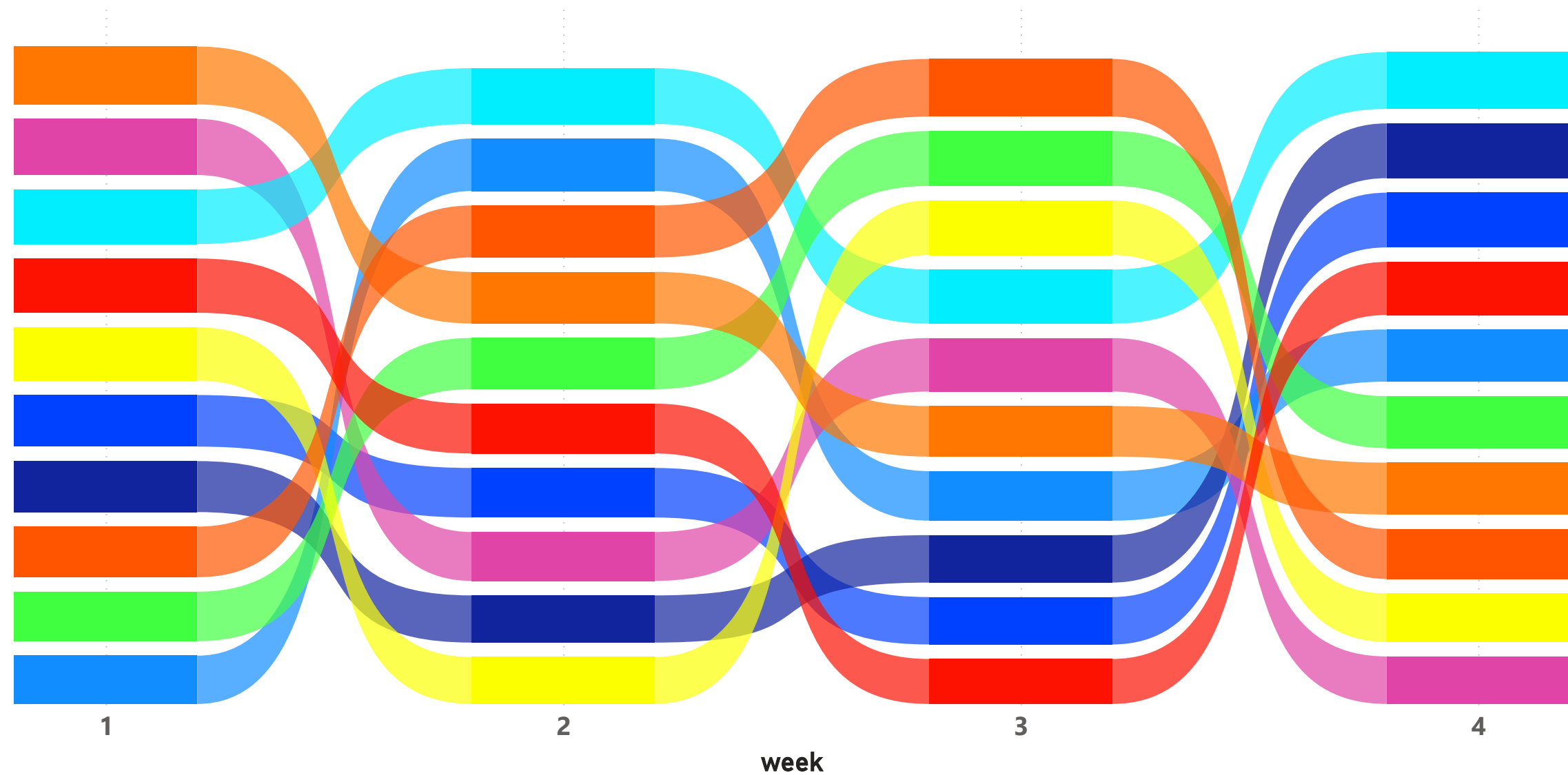


Promotion 1 is the most effective in **7 of the top 10 stores** by Average of Sales in Thousands.

Promotion 3 is the most effective in **3 of the top 10 stores** by Average of Sales in Thousands.

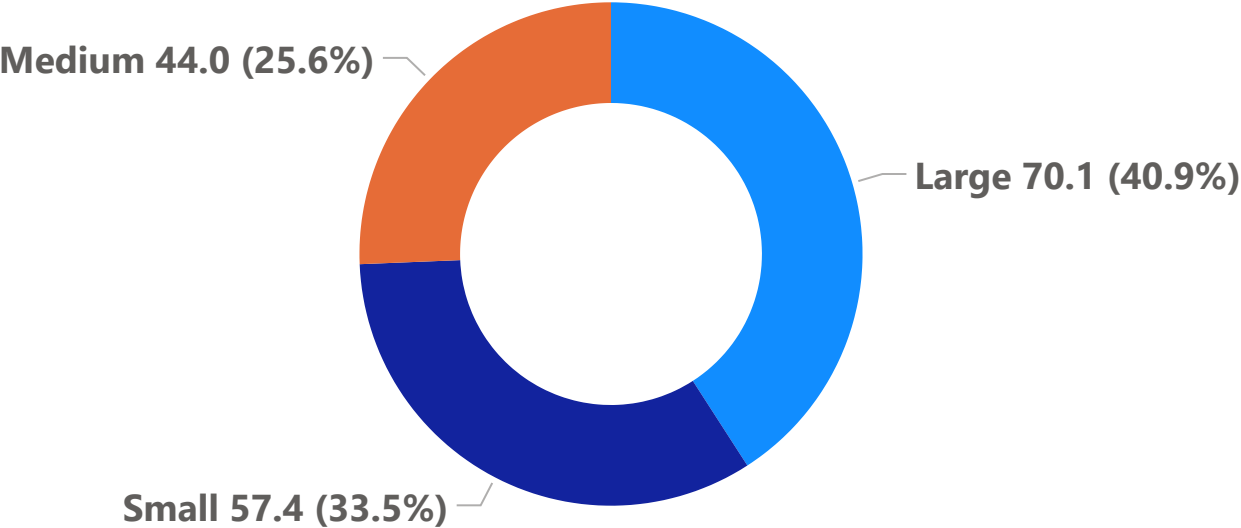
Average of SalesInThousands by week and LocationID

LocationID 202 205 207 208 209 210 214 218 220 222



Location 209 is among the highest in Average Sales across weeks.
Location 218 is also among the highest, but its relative Average Sales go down every week.

(Average of SalesInThousands by MarketSize



MarketSize

- Large
- Small
- Medium

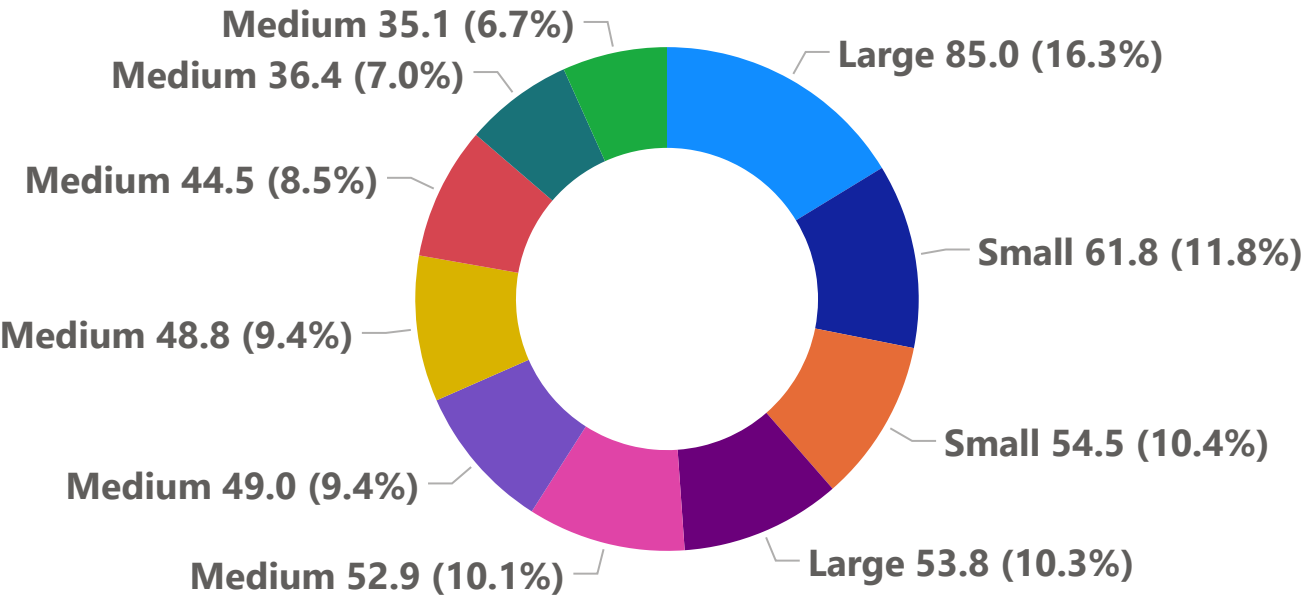
Average of Sales in Thousands
(From Greatest to Least)

Large > Small > Medium

Large and **Small** Sized Markets
consistently see higher average sales
than **Medium** Sized Markets.

Market ID 3 has the highest average sales
by a wide margin.

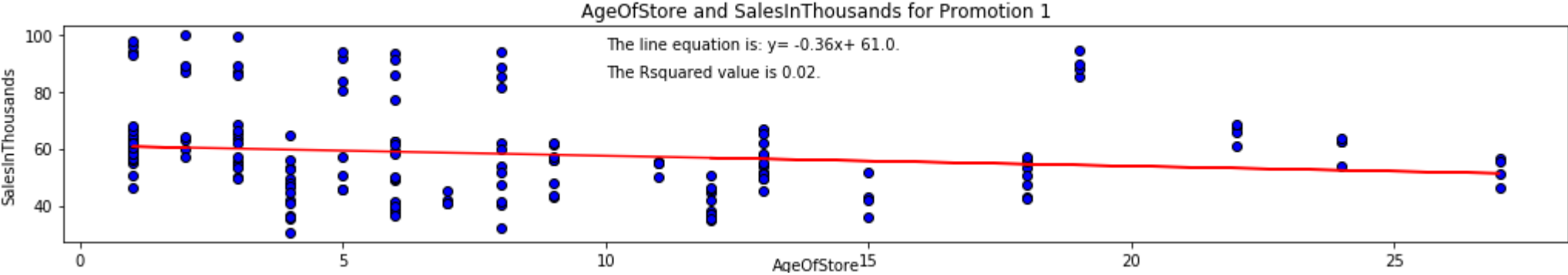
Average of SalesInThousands by MarketID



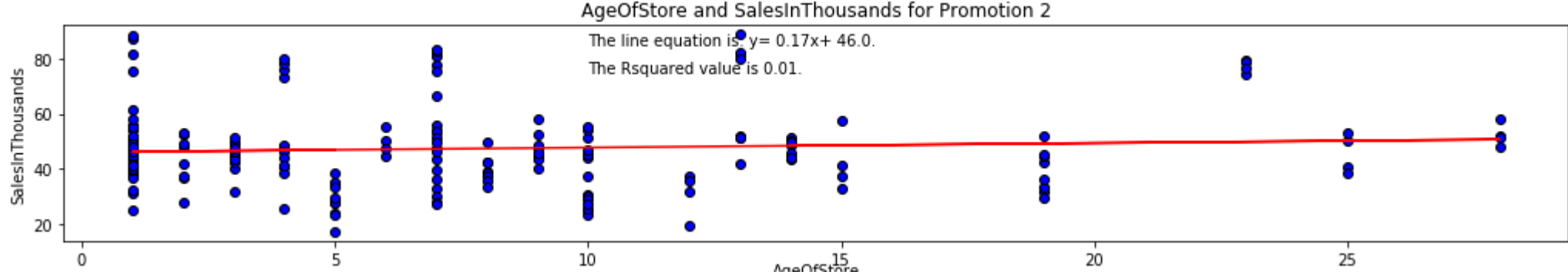
MarketID

- 3
- 2
- 4
- 10
- 9
- 8
- 5
- 7
- 6

SalesInThousands



SalesInThousands

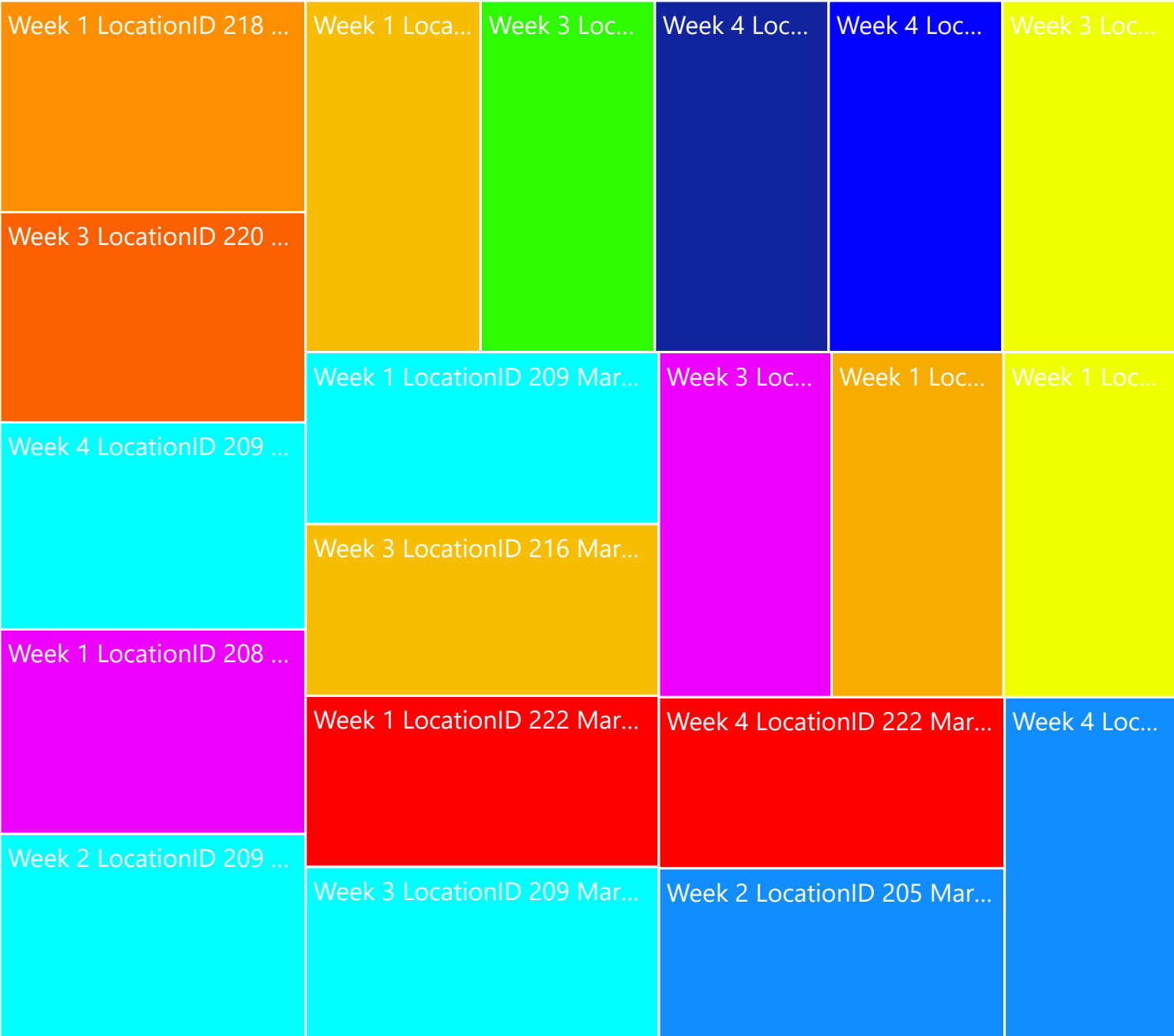


SalesInThousands



The **Age of Store** does not predict the variation in **Sales in Thousands** for **any of the Promotions**.

Average of SalesInThousands by
week-LocationID-MarketID-Promotion



Weeks 1 & 3 had the most frequent occurrence in the Top 20 by average in Sales, as well as **Location 209**.

- The most popular combinations by average of Sales in Thousands are:
1. **Week 1 - Location ID 218 - Market ID 3 - Promotion 1**
 2. **Week 3 - Location ID 220 - Market ID 3 - Promotion 1**
 3. **Week 4 - Location ID 209 - Market ID 3 - Promotion 1**
 4. **Week 1 - Location ID 208 - Market ID 3 - Promotion 3**
 5. **Week 2 - Location ID 209 - Market ID 3 - Promotion 1**

References

1. <https://www.kaggle.com/datasets/chebotinaa/fast-food-marketing-campaign-ab-test>

