**Week 9 workshop: Advanced Pandas Retail Chain Performance Analysis**

**DAB July 2025**

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**Wednesday October 6th, 2025:**

***Discussion Questions:***

1. **Date Time Benefits**: How can extracting day of the week and month from dates help a retail business make better decisions?

It helps them by giving them an extra layer of analysis specifically time base analysis for example identifying which time periods are performing better so they can make decisions depending on that or it would better direct their discission making

1. **Group By Value**: Why is it useful to group data by categories, states, or time periods rather than looking at individual transactions?

it saves time and gives the business a bigger picture. Rather than looking at individual transactions it helps the business identifying the patterns faster and in a more efficient way.

1. **Business Applications**: Based on your findings, what simple recommendations would you give to help the retail chain improve their performance?

In terms of inventory: to expend their sports and outdoors category catalog because it’s the category with the least number of products, but it is the best performing category in terms of total revenue. The electronics category is somewhat similar case.

We would also recommend focusing on the end of year sales because it is the best preforming time period but also try to do a summer sale because those are the worst preforming months.

They could also try to expand to other state or at least provide better outreach and deliver to other states , because their products are only sold in 5 out of 50 states.