Analyzing New Member Digital Activity

Lama Aljuraisi, Noam Arie, Kaustaba Baratam, Aaditya Bhoota, Brayden Brackett, Nihar Chintamaneni, Vivek Chudasama, Sehwan Kim, Thanmaya Pattanashetty, Samyutha Potharaju, Sharan Sivakumar

Introduction
Over the course of the year, we have worked alongside USAA to determine patterns and trends within their data. We analyzed the trends in digital intensity across 12 months since the users began their membership. The digital intensity refers to the number of times users utilize USAA’s resources.

Future Goals
Using our findings and analysis, a future path of research would be to find specific demographics that USAA should target in order to increase digital activity among specific customer groups. We could also further stratify the data to figure out specific causes for changes in digital intensity over different months.

Conclusion
At the end of our project, we found that the results we predicted before starting our analyses were not consistent with our final results. Although we expected customers who purchased more products to be more digitally active, we found various trends that did not align with this. Our biggest challenge during our research was finding an association between products purchased, digital intensity, and digital activity.

Acknowledgments
Thanks to Mike Moya, Ohn Gordon, Ryan Knefel, Jennifer Deming, Kali Lacy, and the rest of the Purdue Data Mine staff for constantly providing helpful feedback and guiding us throughout the year.

Key Terms:
- Digital Intensity: a percentage of non-call sessions out of the overall sessions
- Digital adoption: Whether a user has had a digital session
- Digital activity: Whether a user had a digital session that month
- Digital count: the number of digital sessions a member had that month

Research Methodology:
- Cleaning up the data: Removing members with obviously wrong ages and first product purchased
- Removing members who did not buy a product
- Removing members who did not have a product
- Segmenting the data: Seeing how digital intensity and digital adoption varies by generation, member type, military branch, and first product purchased
- Creating a function to be able to compare the digital adoption for any two segments
- Modeling the phone sessions (calling) vs mobile sessions vs internet sessions

Figure 1 on the right is showing the effects of a user purchasing a product to their digital intensity. This figure shows that purchasing a product starts a decrease in digital intensity that is carried over to the month after.