



Automated Explanation in SAS Viya

Visual Analytics
15.03.2022

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Analytical Consultant



Demonstration Automated Explanation

Editing

Report 1

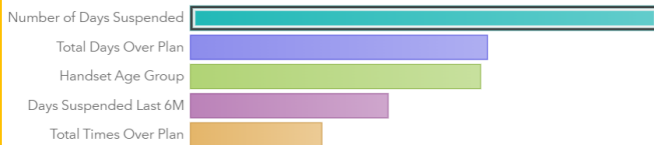
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Page 1

What are the characteristics of Churn Flag?

Churn Flag has a 12.13% chance (6.9K of 57K) of being 1. It's the least common Churn Flag value.

What factors are most related to Churn Flag?

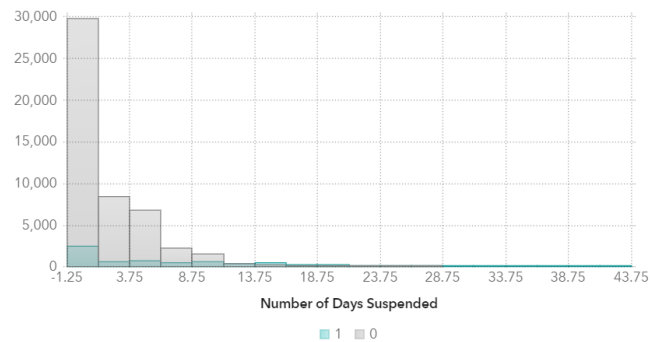


What are the groups based on Number of Days Suspended by the chance of Churn Flag being 1?

< High Low >

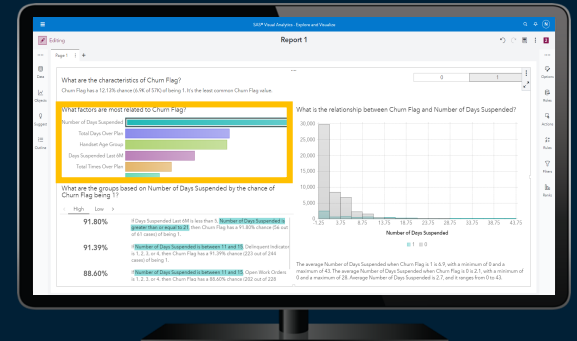
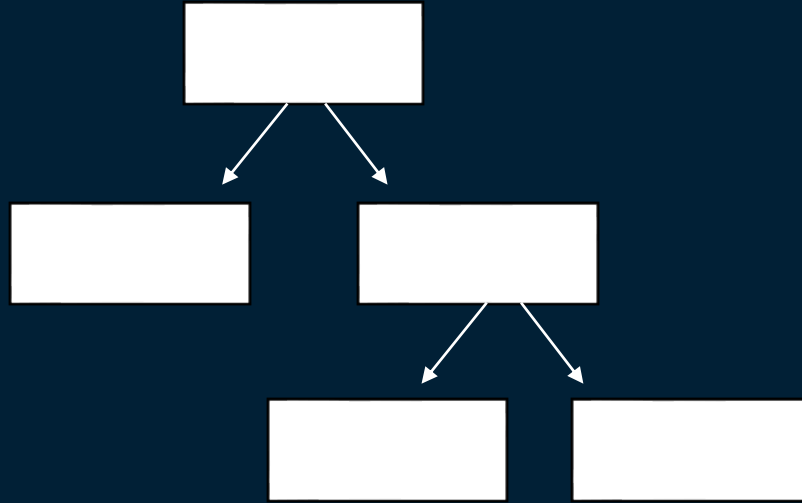
91.80%	If Days Suspended Last 6M is less than 5, Number of Days Suspended is greater than or equal to 21 , then Churn Flag has a 91.80% chance (56 out of 61 cases) of being 1.
91.39%	If Number of Days Suspended is between 11 and 15 , Delinquent Indicator is 1, 2, 3, or 4, then Churn Flag has a 91.39% chance (223 out of 244 cases) of being 1.
88.60%	If Number of Days Suspended is between 11 and 15 , Open Work Orders is 1, 2, 3, or 4, then Churn Flag has a 88.60% chance (202 out of 228

What is the relationship between Churn Flag and Number of Days Suspended?

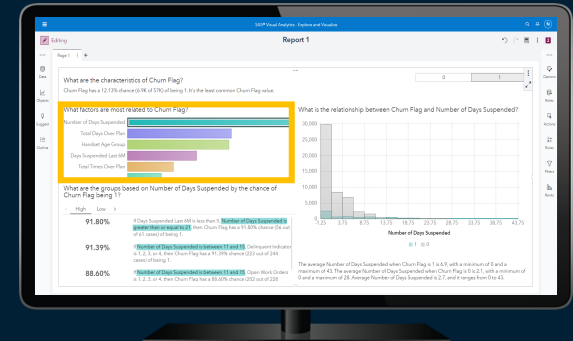
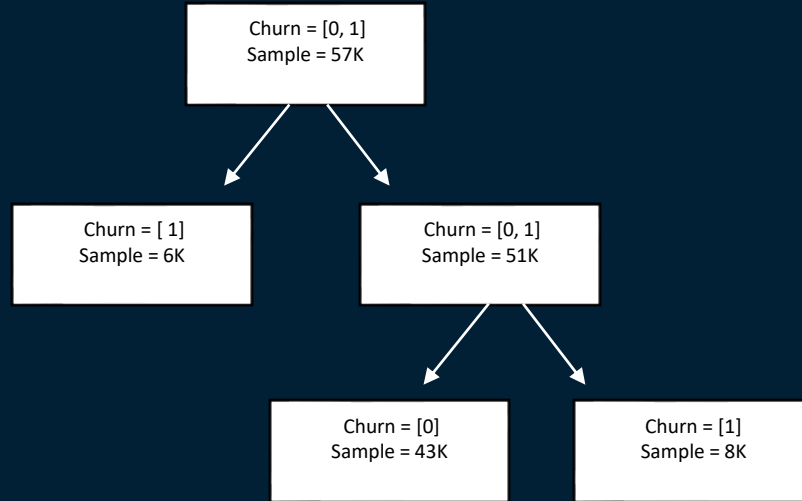


The average Number of Days Suspended when Churn Flag is 1 is 6.9, with a minimum of 0 and a maximum of 43. The average Number of Days Suspended when Churn Flag is 0 is 2.1, with a minimum of 0 and a maximum of 28. Average Number of Days Suspended is 2.7, and it ranges from 0 to 43.

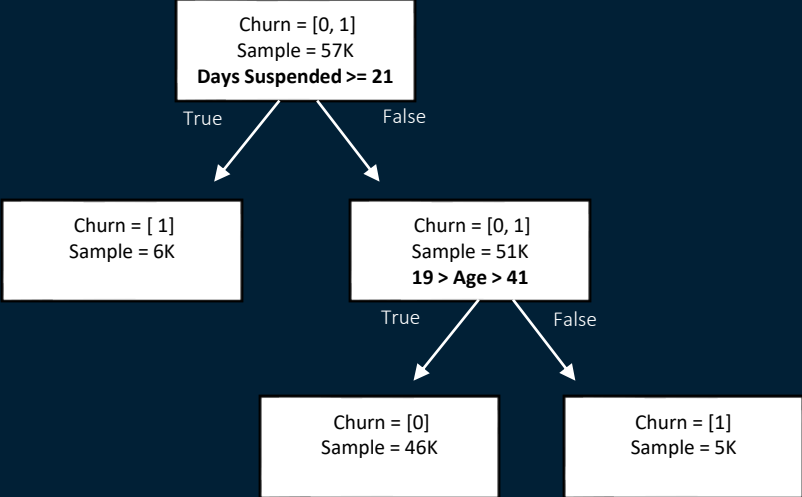
Decision Tree



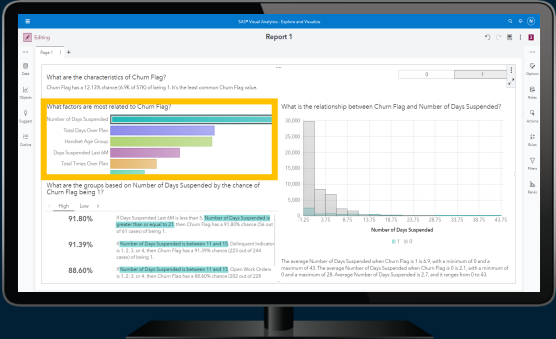
Decision Tree



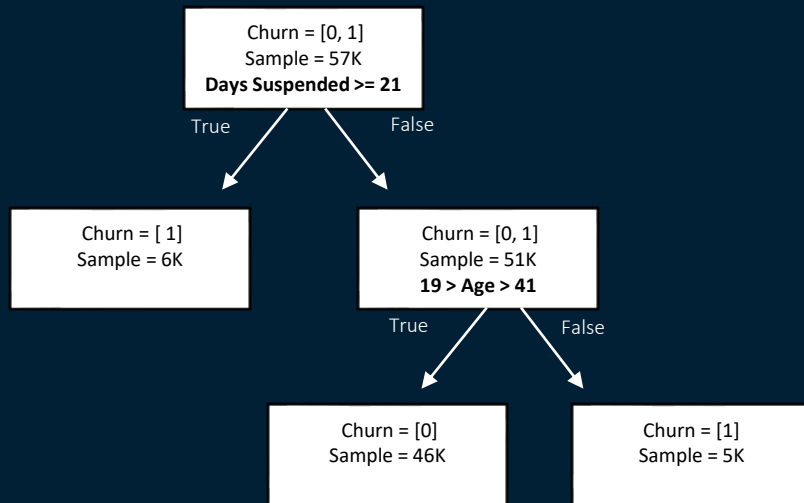
Decision Tree



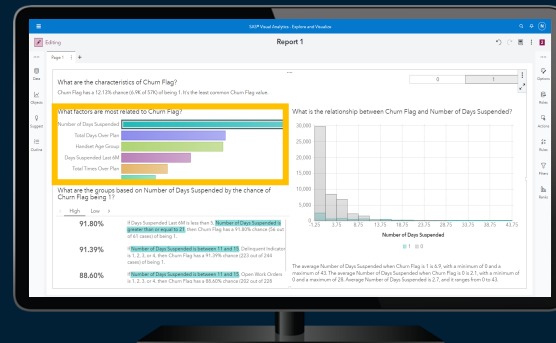
Error is reduced!



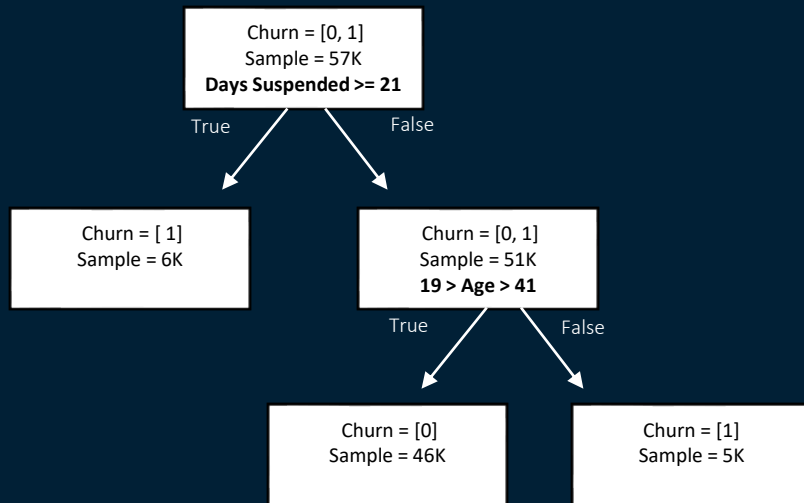
Decision Tree



- We want to find the factors that provides us with the most information
- These factors will reduce errors the most (this is called “information gain”)



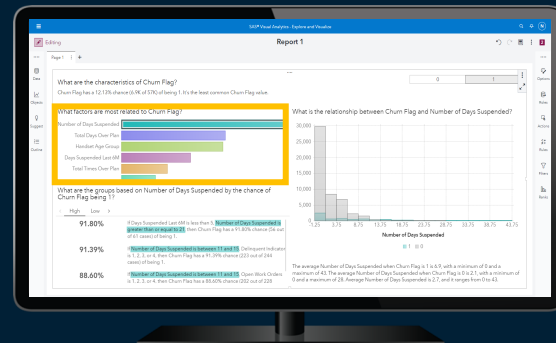
Decision Tree



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- Variable Importance:
Sum of decrease in error when split by a variable

- Relative Importance:
Variable importance divided by the highest variable importance value



Editing

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Data

Objects

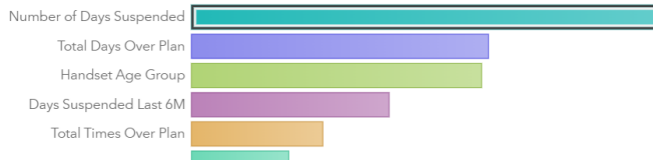
Suggest

Outline

What are the characteristics of Churn Flag?

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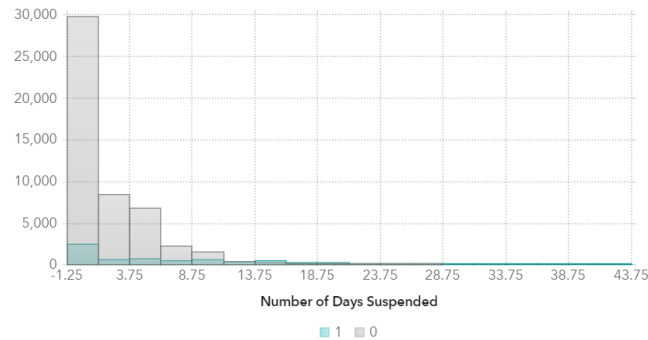


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Options

Roles

Actions

Rules

Filters

Ranks

SAS Documentations

- <https://www.sas.com/content/dam/SAS/support/en/sas-global-forum-proceedings/2019/3526-2019.pdf>
- <https://go.documentation.sas.com/doc/en/vacdc/8.4/vaobj/n0ewwfd6udhv7qn1nropd18lof9j.htm>

Thanks!



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