



KNIME (The Konstanz Information Mine)

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Agenda



**KNIME
Analytics
Platform**



Tools



Features



**Customer
Churn
Prediction
model using
KNIME**



**Pros and
Cons**



Conclusion



References

What is the KNIME Analytics Platform?

- ✓ Free and open-source data analytics, reporting, and integration platform.
- ✓ Used in various fields like Pharmaceutical Research, CRM, Customer Data Analysis, Business Intelligence, Text Mining, and Financial Data Analysis.
- ✓ Strongest and the most comprehensive free platform for drag and drops analytics, Machine Learning, and ETL (Extract Transform and Load).
- ✓ Using the KNIME Analytics Platform, we can create visual workflows using a drag-and-drop style graphical interface, without coding.

The KNIME suite includes two tools

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**KNIME
Analytics
Platform**

DESKTOP-BASED TOOL WHERE ANALYSTS
AND DEVELOPERS CONSTRUCT
WORKFLOWS

A teal circle containing the text 'KNIME Server' in white.

**KNIME
Server**

ENTERPRISE SOFTWARE DESIGNED FOR TEAM-
BASED COLLABORATION, AUTOMATION,
MANAGEMENT, AND DEPLOYMENT OF
WORKFLOWS



FEATURES

**Intuitive user
interface**

ETL processes

**Machine
learning/Deep
Learning**

**API Integration &
Interactive Visual
Analytics**

**Natural Language
Processing**

**Import/export
Workflows**

Building a Customer Churn Prediction Model Using KNIME

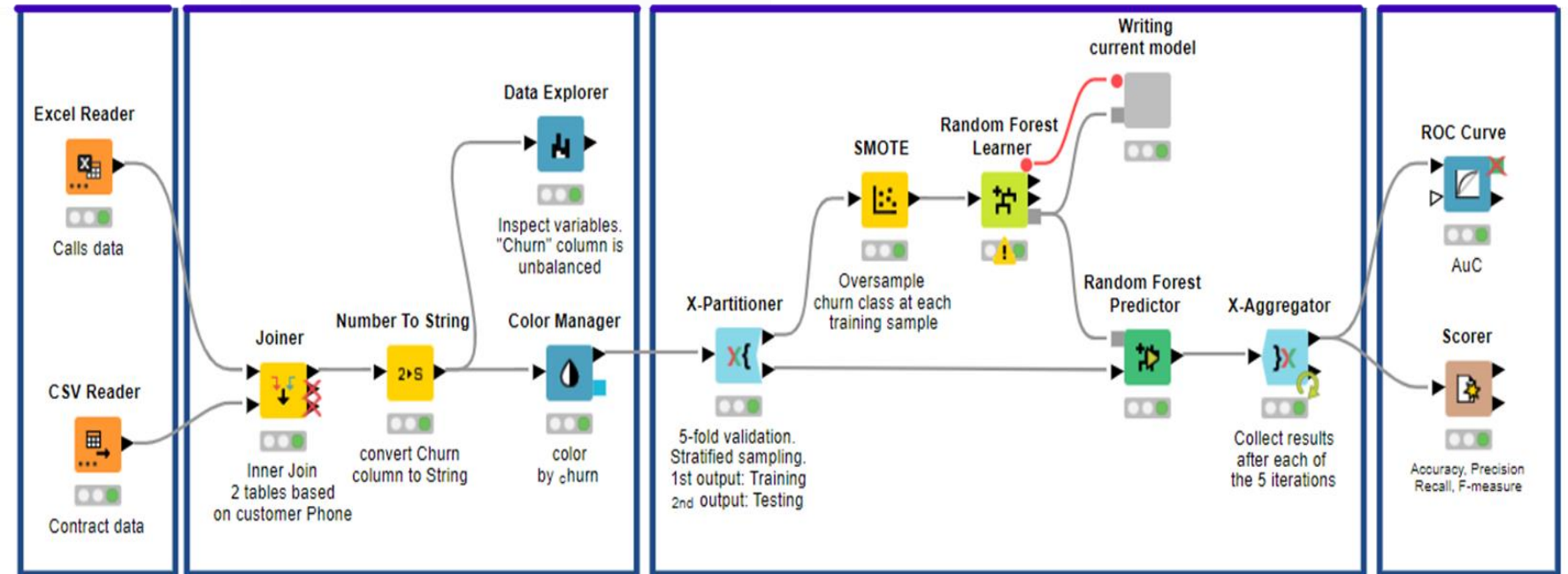
Features of dataset used

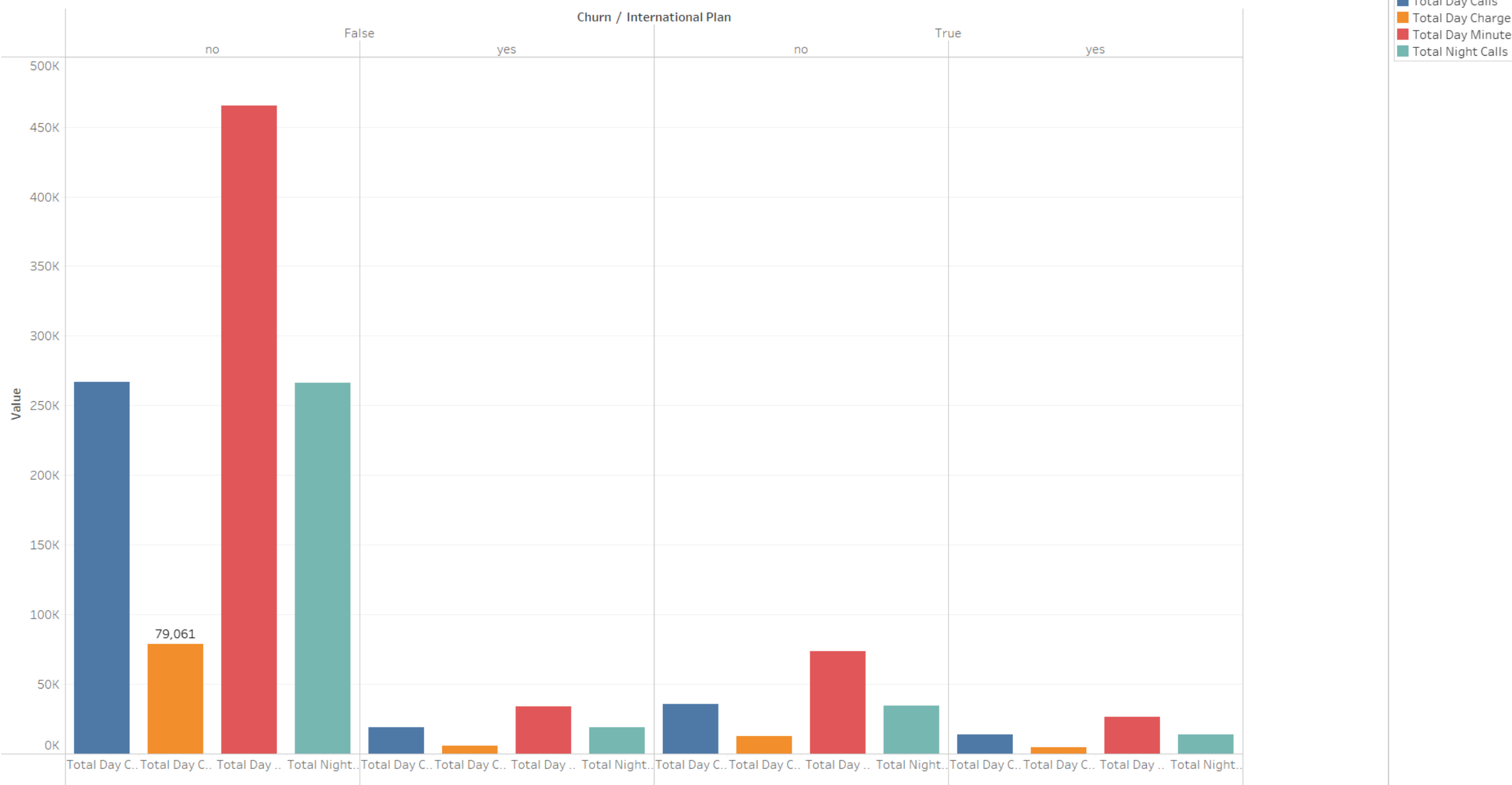
International Plan activated or not, total day minutes, total day calls, total day charge, total eve minutes, total eve calls, total eve charge, and similarly for the night as well, which can be used for churn prediction.

- Churn' refers to the customer who cancels a contract or a service at the moment of renewal of the service/ contract.
- Identifying which customers will churn or are at risk of churning is vital for companies to take measures to reduce the churn.

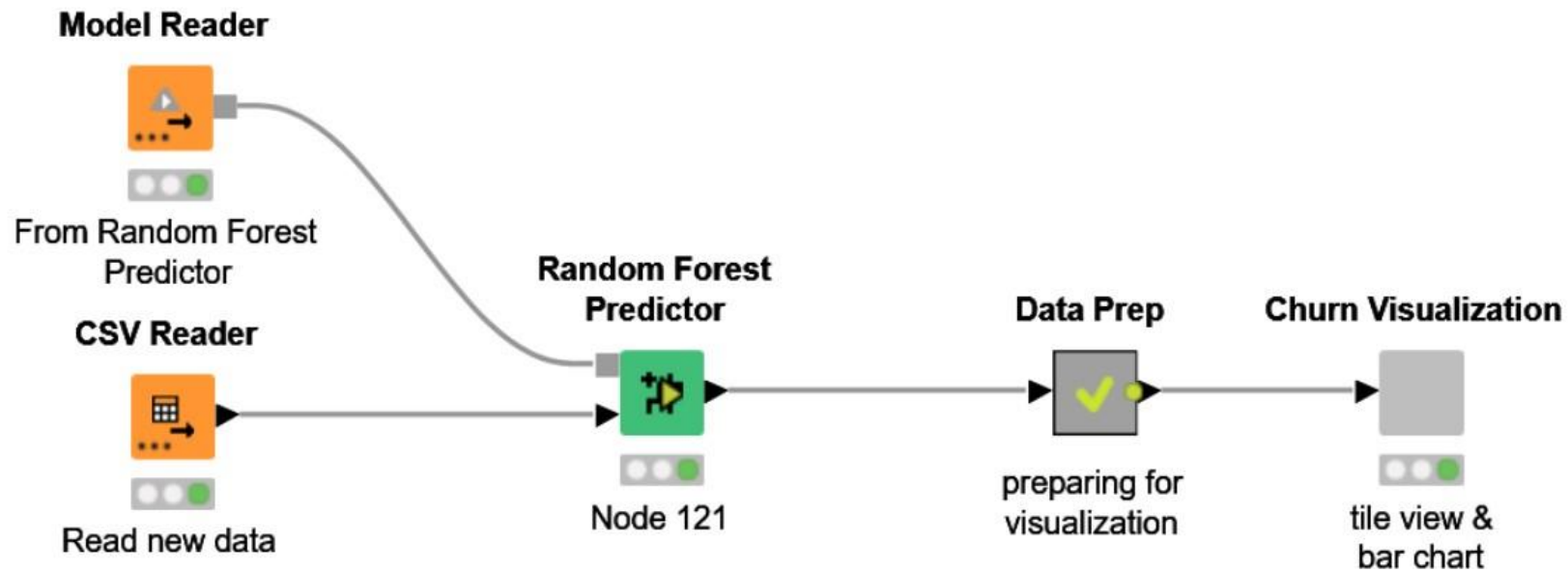
Preparing and Exploring the Data:

- Step 1: Reading the Data
- Step 2: Joining the data from two files
- Step 3: Converting Churn Column into string type
- Step 4: Exploring the Dataset
- Step 5: Training and Testing our Model:

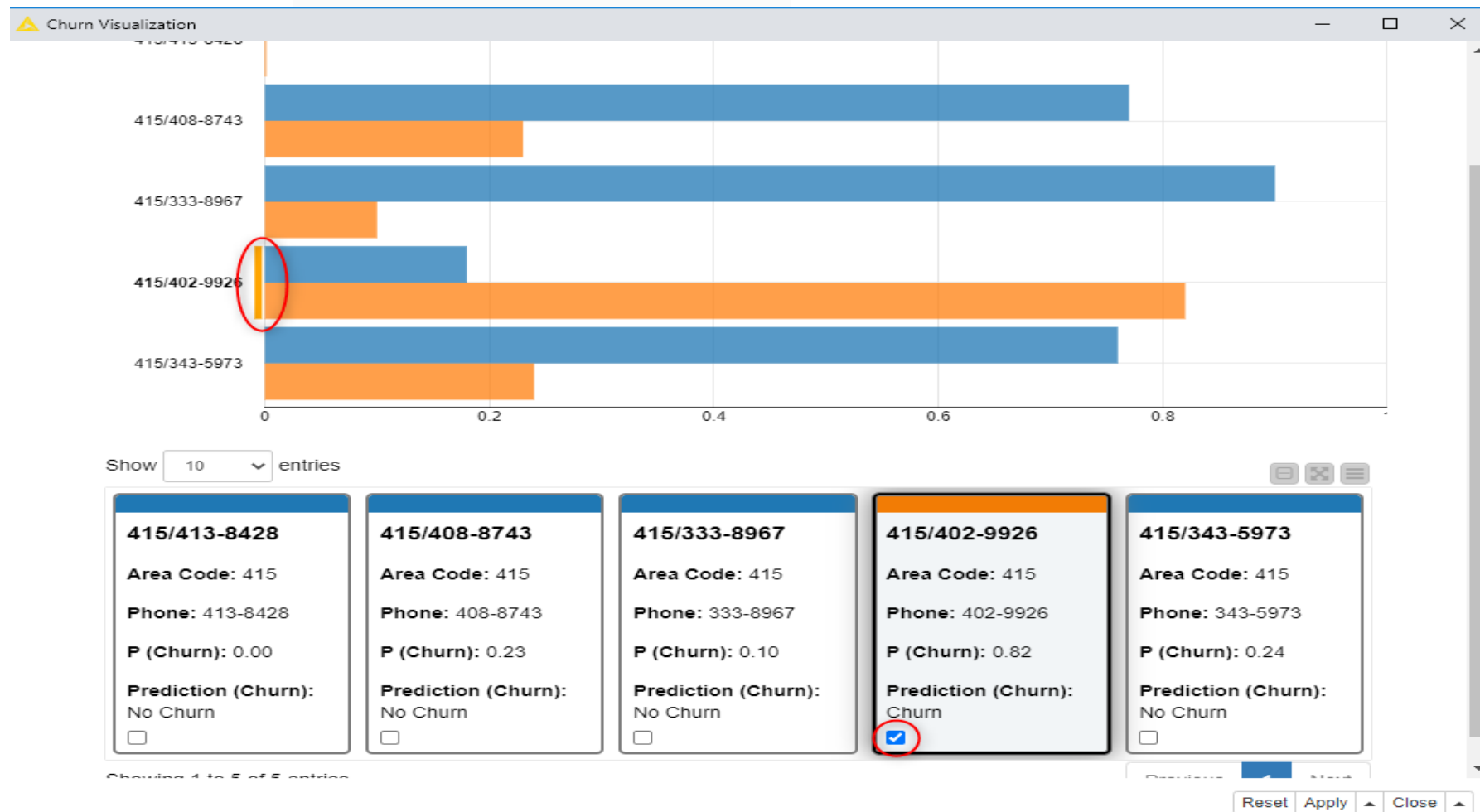




Deploying the Model



DASHBOARD



Pros

No License Fee.

Easy to Understand and Learn

Open Architecture

No coding is required Good
Community support for your Q&A.

Large data set processing

Server-based execution.

Unified interface for data and
cleansing.

Cross-platform interoperability.

Cons

- Cumbersome UI
- Slow to Load.
- KNIME workflows are very big, even for building a straightforward one, due to caching and GUI.
- Knowledge of R/ Python is required to use the Statistical analysis in KNIME fully.
- Memory Usage is a challenging area sometimes while using the KNIME platform.

CONCLUSION

- ✓ **KNIME Analytics Platform is an excellent low-code data preparation and data science tool.**
- ✓ No coding experience is required, and with its free user licenses and open-source philosophy, no other competing tool is as accessible.
- ✓ However, all that is moot if you do not know how to use the tool.

REFERENCES

- https://www.tutorialspoint.com/knime/knime_summary_future_work.htm
- <https://www.knime.com/solutions?page=1>
- <https://www.phdata.io/blog/getting-started-with-knime/>
- <https://www.wisr.net/services/ai-machine-learning/knime/>
- <https://www.analyticsvidhya.com/blog/2022/10/using-knime-for-data-driven-decision-making/>

Thank you!