

# Machine Learning with SAS Viya: A Comprehensive Guide for Beginners and Advanced Users

## to Machine Learning

Machine learning (ML) is a subfield of artificial intelligence (AI) that gives computers the ability to learn without being explicitly programmed. ML algorithms are trained on data to identify patterns and make predictions, enabling businesses to automate complex tasks, improve decision-making, and gain valuable insights from data.



## Machine Learning with SAS Viya by Ethan Williams

★★★★★ 5 out of 5

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Screen Reader : Supported  
Enhanced typesetting : Enabled  
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SAS Viya is a powerful software platform that provides a comprehensive suite of tools for data preparation, exploration, visualization, and machine learning. With SAS Viya, you can leverage the latest ML techniques to build predictive models, deploy them into production, and monitor their performance.

## Benefits of Using SAS Viya for Machine Learning

- **End-to-end platform:** SAS Viya offers a complete solution for all stages of the machine learning lifecycle, from data preparation to model deployment and monitoring.
- **Integrated environment:** SAS Viya provides a unified environment for data scientists, analysts, and business users to collaborate on machine learning projects.
- **Wide range of algorithms:** SAS Viya supports a wide range of machine learning algorithms, including supervised learning, unsupervised learning, and ensemble methods.
- **Automated model building:** SAS Viya's AutoML feature automates the process of building machine learning models, making it accessible to users with limited ML experience.
- **Deployment and monitoring:** SAS Viya provides tools for deploying machine learning models into production and monitoring their performance over time.

## Getting Started with Machine Learning in SAS Viya

To get started with machine learning in SAS Viya, you will need to have access to the SAS Viya platform and the SAS Visual Data Mining and Machine Learning module. Once you have these, you can follow these steps:

1. **Import your data:** Import the data you want to use for machine learning into SAS Viya.
2. **Prepare your data:** Clean and transform your data to make it suitable for machine learning.

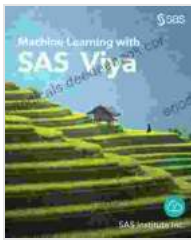
3. **Select a machine learning algorithm:** Choose the appropriate machine learning algorithm for your task.
4. **Train your model:** Train the machine learning model on your prepared data.
5. **Evaluate your model:** Evaluate the performance of your model using metrics such as accuracy, precision, and recall.
6. **Deploy your model:** Deploy your trained model into production to make predictions on new data.

## **Advanced Techniques in Machine Learning with SAS Viya**

Once you have mastered the basics of machine learning with SAS Viya, you can explore more advanced techniques such as:

- **Feature engineering:** Create new features from your existing data to improve the performance of your machine learning models.
- **Model tuning:** Optimize the parameters of your machine learning models to improve their accuracy.
- **Ensemble methods:** Combine multiple machine learning models to create a more powerful model.
- **Deep learning:** Use deep learning neural networks to solve complex machine learning problems.

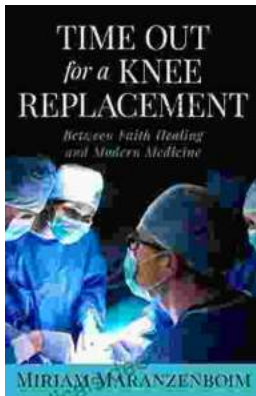
Machine learning with SAS Viya is a powerful tool that can help you unlock the value of your data. By following the steps outlined in this guide, you can master the basics of machine learning and start building predictive models that can drive better decision-making and improve business outcomes.



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