Accelerate the impact of AI in your business with MLtiply

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It is claimed that, by 2035, Artificial Intelligence (AI) will have the power to increase productivity by 40% or more. It is no exaggeration to say, AI is now absolute for businesses to stay competitive, and it isn't an option anymore. Early adaptors of AI are already reaping benefits by staying on top of their competition and can vouch for the impact AI brings to research and development, innovation, and market rollouts to even predict future shifts in any business model. Digital disruption is no more the buzz, and the next big thing we are looking at is the AI disruption, which brings a much larger scale of insight and knowledge that is transformational.

According to Gartner, AI will be one of the top five investment priorities for more than 30% of CIOs globally by 2020 - a trend we are looking forward to. Many organizations are still early in their data science journey and understand how AI can transform their businesses. AI makes it possible to make machines smarter with its ability to learn from experience and adapt new inputs while performing human-like tasks. AI combines large amounts of data with fast, iterative processing and highly intelligent algorithms that enable machines to recognize patterns and ultimately sense, comprehend, learn, and act. As AI's potential makes it ubiquitous, how can enterprises accelerate the impact of AI further with the right

machine learning platform, as everything a machine learns is based on it? Progressive enterprise organizations are already using automated machine learning and deep learning to increase their productivity >20x using platforms such as MLtiply.

So, how can such platforms help, keeping in mind the big picture – holistic business growth?

What is MLtiply, and how it helps?
MLtiply is an API driven software platform that helps create statistical machine learning models used in artificial intelligence with minimum effort. It is designed to be used with the popularly available frameworks for machine learning and can be considered an accelerator solution for designing, training, comparing, and validating machine learning models. This platform is also adaptable for multiple industries and can aid in creating cost-effective AI solutions.

MLtiply provides the developers with a simplified and guided model creation process through a visual, menu-driven interface for exploratory data analysis, feature engineering, model training, fine-tuning, and cross-validation. It is specifically designed to automate the repetitive operations involved in the development of machine learning models. The organized and streamlined workflows help achieve a beneficial and fast process to explore data, process features, and train multiple models with multiple hyperparameter combinations. Cross-validation of models is possible to find the best model for a particular problem. MLtiply is a robust platform that helps achieve productivity improvement for data engineers, data scientists, and data analysts. This is supported with intuitive dashboards, auto-suggestions using prescriptive analytics, performance metrics, and custom model creation capabilities.

The framework is meant for data engineers, data scientists, and data analysts involved in creating statistical and text-based (NLP) machine learning in any vertical/industry. It complements human intelligence by freeing them to add value-added activities using domain and technical knowledge. Since it is possible to achieve a streamlined and cost-effective workflow for model creation within a shorter time, this could be a real value add to our customers. Data exploration & visualization, feature engineering, model training, cross-validation of models, etc. are some of the key operations that can be automated.

How can businesses benefit from it?

Automated machine learning democratizes this fascinating technology by making the power of machine learning accessible to everybody with reduced time and money and by incorporating the best practices from top data scientists.

MLtiply can be integrated with any popular ML frameworks like SciKit Learn, Keras, TensorFlow, etc. and supports modeling through code with a visual interface. Using prescriptive analytics and suggestions based on data, understanding is provided to guide users in experimenting with different problem settings in every stage of the model building workflow. Model versioning can be customized, and hyperparameter tuning and cross-validation options are provided. Model training can be done using GPUs, and the results can be saved for comparing models. There is a high level of flexibility and transparency to understand and modify training a model. Modularized architecture brings in improved governance.

MLtiply boasts a simple UI and is web-based with a backend on-premises servers or on the cloud. The system runs on any UNIX based Operating System and is developed using Python. The training automatically makes use of the available GPU.

Some use cases where MLtiply can be successfully implemented

MLtiply can be proven efficient in various scenarios, and some of these include:

• Component failure prediction: When it comes to maintaining and repairing aircraft components due to regular wear and tear, MLtiply predicts future failures and proactively plans appropriate maintenance activity to reduce downtime.

• Customer intent analysis: On a live chat platform, MLtiply can help build an intent analysis ML algorithm model to analyze each question's intent. Based on the intent, the system assigns the confidence scope for the predicate. This can lead to quicker abandonment of the chat window and subsequent customer dissatisfaction and loss.

• HR attrition data analysis and prediction: In the HR industry, MLtiply can help determine the probability of a particular employee being in the high-risk zone of leaving the company. This significantly reduces the manual analysis of studying employee behavior over time and minimizes attrition.

Conclusion

While AI/ML is itself bringing in intelligent automation to data analytics, we now have automation of these models' development, thus increasing its efficiency. Snapshots of models can be saved, and access to previous versions are available. The developed models can be downloaded as code to be further optimized by experienced data scientists. The individual results are displayed in the user interface, and a comparison of model performance across versions can be viewed. Automation of ML pipeline helps to avoid errors that might creep in if done manually. The platform helps make data scientists and developers more productive, improve return on investment, and reduce human effort.