

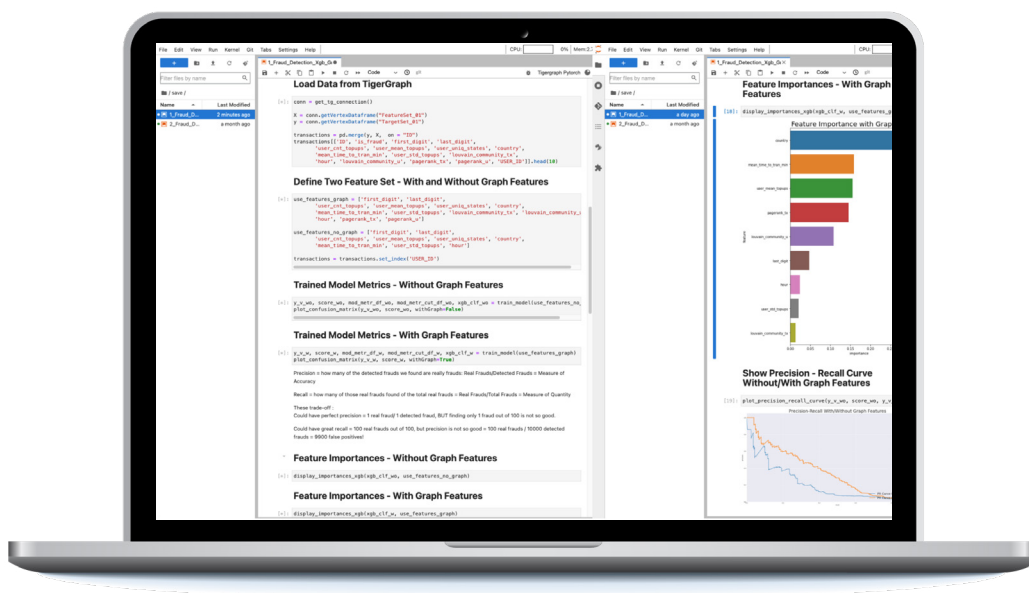


## Machine Learning Workbench

# Unlock Smarter Insights at Scale with Machine Learning on Connected Data

The TigerGraph Machine Learning Workbench is a Python-based framework that accelerates development of graph-enhanced machine learning, which leverages the added insight from connected data and graph features for better predictions. Due to its accurate predictive power stemming from unique graph features and graph models, the workbench enables organizations to unlock even better insights and greater business impact.

The ML Workbench makes it easy for AI/ML practitioners to explore graph-enhanced ML models and Graph Neural Networks (GNNs) because it is fully integrated with TigerGraph's database for fast, parallelized graph data processing/manipulation on enterprise-level data sets.



## Powerful and Versatile

The ML Workbench is designed to interoperate with popular deep learning frameworks such as PyTorch Geometric, DGL, and TensorFlow\*, providing users with the flexibility to choose a framework they are most familiar with.

The ML Workbench is also plug-and-play ready for Amazon SageMaker, Google Vertex AI, and Microsoft Azure ML.

ML Workbench is designed to work with enterprise-level data. Users can easily train GNNs even on a large graph without needing a powerful machine thanks to the following built-in capabilities:

- TigerGraph DB's distributed storage and massively parallel processing.
- Graph-based partitioning to generate training/validation/test graph datasets.
  - Sub-graph sampling to support leading edge GNN modeling techniques.
- Graph-based batching for GNN mini-batch training to improve performance and to reduce HW requirements.
- Built-in graph feature generation and extraction for enhancing your traditional ML approach with unique graph features.

ML Workbench is compatible with TigerGraph version 3.2 onwards running on-premise or in the public cloud, right out of the box.

*\* Will be available in a future release.*

## Get Started

Download ML Workbench [here](#).

Here are some resources from our [Developer Portal](#) to get you started:

- Learn from and share with your fellow TigerGraph users: [community.tigergraph.com/](https://community.tigergraph.com/)
- Build your first Graph Neural Network by following our [tutorials](#).
- Do you want an architectural overview? [TigerGraph Machine Learning Workbench Overview](#)
- Want even more? [Visit our TigerGraph Machine Learning Homepage](#)

Have questions? Join our weekly [Graph Gurus Office Hours](#) to get any questions related to graph modeling and GSQL programming

The full documentation is at [docs.tigergraph.com](https://docs.tigergraph.com).

If you have any questions or suggestions, please contact us at <https://www.tigergraph.com/support/>



Graph is essentially what you need to have better representations of your data in terms of dealing with data type, having a unified data model, having a way to represent your data, in order for you to get the most effective business outcomes from the perspective of graph and AI.”

Dan Romuald Mbanga, **Head of Product Strategy, Machine Learning, AWS**



TigerGraph is the only scalable graph database for the enterprise. TigerGraph's proven technology connects data silos for deeper, wider and operational analytics at scale. Four out of the top five global banks use TigerGraph for real-time fraud detection. Over 50 million patients receive care path recommendations to assist them on their wellness journey. 300 million consumers receive personalized offers with recommendation engines powered by TigerGraph. The energy infrastructure for 1 billion people is optimized by TigerGraph for reducing power outages. TigerGraph's proven technology supports applications such as fraud detection, customer 360, MDM, IoT, AI, and machine learning.

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