Introduction

This case study of Digits Financial is based on a March 2021 survey of Vertex Pipelines customers by TechValidate, a 3rd-party research service.

“Since using Vertex Pipelines, we retrain and deploy models in days, not months.”

“We deploy our models with confidence knowing that there is a robust ML CI/CD pipeline that will deploy the model in the target environment reliably.”

“Google Cloud Vertex Pipelines have made it easy to scale our ML pipelines at Digits without the overhead of maintaining dedicated Kubernetes clusters. With our focus on rapid iteration and delivering new value for customers, Vertex Pipelines let us move faster from ML prototypes to production models, and give us confidence that our ML infrastructure will keep pace with our transaction volume as we scale, with minimum DevOps requirements.”

Challenges

The business challenges that led the profiled company to evaluate and ultimately select Vertex Pipelines:

- Experienced the following pain points before using Vertex Pipelines:
  - Their speed to market
  - Maintaining model integrity
  - Moving models from prototype to production
  - Retraining a model based on new data and features

Use Case

The key features and functionalities of Vertex Pipelines that the surveyed company uses:

- The following areas use Vertex Pipelines:
  - ML Engineers
  - Data Scientists
  - Data Engineers
- Most valuable Vertex Pipelines attributes/features to their organization:
  - Reusability (pipeline components)
  - Governance (ML metadata management)
  - Orchestration
  - Reproducibility (between different target environments)
  - Model lineage and ML metadata tracking

Results

The surveyed company achieved the following results with Vertex Pipelines:

- Google Cloud Vertex Pipelines helped them to develop their career in the following ways:
  - Increased velocity of pilots/published
  - Skillset differentiation in market
  - Increased demand in the market
- Experienced the following benefits since using Vertex Pipelines:
  - Data scientists and ML engineers are more productive and collaborative due to the reuse of data engineering and feature engineering components
  - Their ML engineering team has in control of all the models in production and adapts faster than before to evolving business needs
  - Their ML engineers spend less time finagling with resource provisioning, software packages, and target environment optimizations for the models deployed into production
  - They have more effective monitoring of models in production to ensure they don’t go stale
  - They no longer scramble for audits and compliance reviews thanks to a streamlined governance process
- Amount of models their ML engineers manage:
  - Before Vertex Pipelines: 1-10
  - After Vertex Pipelines: 1-10

Company Profile

- Company: Digits Financial
- Company Size: Small Business
- Industry: Financial Services

About AI Platform Pipelines

Google Cloud provides organizations with leading infrastructure, platform capabilities, and industry solutions to help them solve their most critical business problems.

Learn More:

Google Cloud

Source: Hannes Hapke, Machine Learning Engineer, Digits Financial

Validated

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