Tiger Analytics

Tiger Analytics helped a large CPG brand reduce 60% manual efforts through an end-to-end computer vision platform

Tiger Analytics created a solution that enabled the client to onboard and deploy use cases on AI-driven Computer Vision solutions. It ensured that all relevant use cases were onboarded with full support for teams, given as quickly as possible. The solution also increased the client's system stability, especially during peak hours, through integrating auto-scaling.

The Background

Our client is a leading CPG company based in the US. They dealt with various Computer Vision use cases where each one of their teams faced time and effort-related complexities in onboarding, infrastructure provisioning, deployment, etc. So, the client needed a centralized platform with end-to-end capabilities and accelerators. It would go a long way to help quickly onboard and deploy all use cases that require AI-driven Computer Vision solutions.

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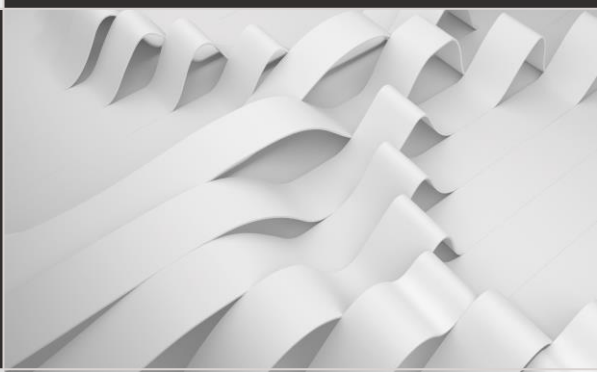
Key Challenges

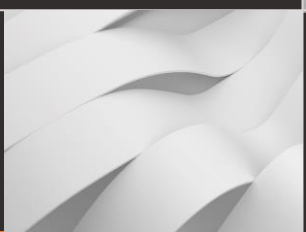
Infrastructure access-related delays:

The limited access to the infrastructure caused a significant dependency on other teams for debugging, leading to prolonged delays.

Right contact unavailability:

It was challenging to connect with the appropriate person or team when making a new request.





Delayed SLAs:

The Service Level Agreements (SLAs) for service requests were notably extended.

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Our Solution

Tiger Analytics helped develop an end-to-end Computer Vision platform that could effectively overcome the client's existing challenges.

The team first created generic DevOps pipeline templates for the automated deployment of models onboarded via the platform portal. Various tools, including ELK, Kibana, AppDynamics, Application Insights, and PowerBI, enabled customized logging and monitoring for all services. Optimized KQL queries were then written to extract custom logs from Application Insights and presented as charts in a web app using the React Code.

The team emphasized security, integrating DevOps templates with Sonarqube, Fortify, and Synk tools to meet code and image vulnerability standards.

The deployment also leveraged best practices in Kubernetes, including auto-scaling with KEDA and HPA and various probes (liveliness, readiness, and startup). The Blob CSI Driver approach was adopted to mount model files as a volume in Kubernetes pods, streamlining latency, scaling time, and image size.

The team then utilized Terraform/ARM modules for certain resources, reducing infrastructure provisioning time and maintaining high security.

Furthermore, complete documentation covered all required steps for DevOps deliverables.

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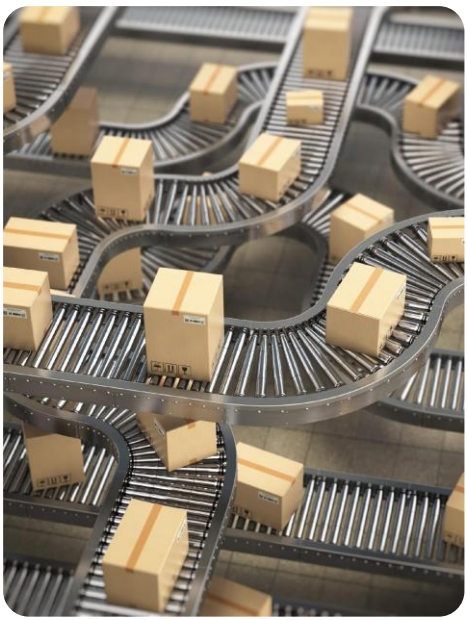
Tech Stack

Azure DevOps, sonarqube, snyk, docker, kubernetes



Value Delivered

A 60% reduction in manual efforts was achieved by introducing the DevOps pipeline for each repo, making it generic and standardized.

All Computer Vision use cases were rapidly onboarded with end-to-end support for teams.

More system stability was achieved during peak hours by integrating function deployments with KEDA for auto-scaling.

About Us

Tiger Analytics is a global leader in AI and Analytics, helping Fortune 500 companies solve their toughest challenges. With over 4000 data technologists and consultants spread across offices in the US, Canada, UK, India, Singapore, and Australia, we help our customers accelerate their AI and Analytics journey in sectors like CPG, Retail, Insurance, BFS, Manufacturing, Life Sciences, and Healthcare. Tiger Analytics is a Great Place to Work Certified and a 'Leader' in the Forrester Wave: Customer Analytics Services Report 2023.

Visit https://tigeranalytics.com. to see how Tiger Analytics provides certainty for a better tomorrow.