



A&L INNOVATION HIGHLIGHT



COMPANY OVERVIEW

Founded in 1985, A&L Canada Laboratories Inc. is an innovative, research-driven, technology company focused on sustainable development, serving a wide range of industries including Agriculture, Environmental, Food & Pharma. In agriculture, A&L provides comprehensive analytical services for soil, plant tissue, feed, fertilizer, and water.

LOCATION: LONDON, ON

TECHNOLOGY



Data Centre and Cloud

A SATURATED INDUSTRY

The precision agriculture industry is saturated with various different web platforms providing basic vegetation metrics such as NDVI to measure the quality of crops. While there are other numerous measurements available, most platforms give only one or two metrics to their users. Without enough metrics, farmers don't often get the full understanding they need to properly analyze how well their crops are actually doing and what actions need to be taken to reduce the number of crop losses.

TERRASITERX

TerraSiteRx is a data analytics platform that integrates a wide range of drone collected farm data with A&L owned soil maps and farming expertise to deliver in-depth understanding and management actions for field operations throughout growing seasons. The platform focuses on data analytics and the fusion of remote sensing algorithms with decades of agronomy expertise. The platform does not simply generate a vegetation index for farmers, but it bridges the gap between remote sensing and management practices and applications. Using high resolution, drone-based imagery to provide more accurate measurements, A&L's platform provides an extended database of metrics such as crop health (MNDVI), plant count, stress map, crop injury, biomass estimation, and targeted soil sampling to help farmers understand how healthy their crops are.

DETERMINING RESOURCE REQUIREMENTS

To process incoming drone images faster, A&L is moving TerraSiteRx to the cloud. But, before the migration they needed to know the computing requirements. With CENGN's expertise and commercial grade testbed, A&L determined the optimal computing configuration – in terms of CPU vs GPU and type of GPU (NVIDIA T4 vs V100) – for each of their different algorithms allowing them to determine the required cloud computing resources needed to virtualize their solution.

“The project result will help us determine and optimize, based on computation requirement and processing time, the cost of each algorithm for our clients.”

Bo Shan, Principal Investigator,

A&L Canada Laboratories Inc.



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