



# Developed an Index Automation Application for Reconstitution, Rebalancing, & Operational Support for a leading North American stock exchange

## Client

The client is a global financial technology provider and exchange operator, based out of the U.S., enabling capital markets with advanced data, analytics, and trading solutions to drive innovation and efficiency.

## Business Need

A leading North American stock exchange and global technology provider engaged Innominds to develop index automation programs for over 400 major indexes. The goal was to fully automate their monthly, quarterly, half-yearly, and yearly reconstitution and rebalancing processes. This initiative aimed to reduce their dependence on market index analysts and legacy Microsoft Excel-based models.



## Solution

- Developed a scalable and reusable development framework using common components.
- Implemented code standardization and documentation standards.
- Executed automation in multiple phases:
  - **Phase 1:** 50 index automations
  - **Phase 2:** 300 additional automations
  - Final phase covered the remaining indexes.
- Delivered over **430+ index automations** for:
  - **Evaluation:** Adding and deleting securities from indexes
  - **Rebalancing:** Adjusting weightages and handling corporate actions
- Built a **reusable function library** on the Index Data Warehouse, significantly reducing development time.
- Utilized **AWS Cloud Infrastructure** and **Databricks** for storage and processing.
- **Migrating** to the updated FactSet platform, as nearly 90 indices depend on FactSet data, and the response attributes were recently changed.

## Value Delivered

- **Scalability:** Enhanced capacity to automate hundreds of indexes.
- **Reusability:** Components and libraries reduced future development efforts.
- **Efficiency:** Minimized reliance on market analysts and outdated Excel/Access models.

## Tools & Technologies Used

AWS | Databricks | SQL | SAS | Programming | R language



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