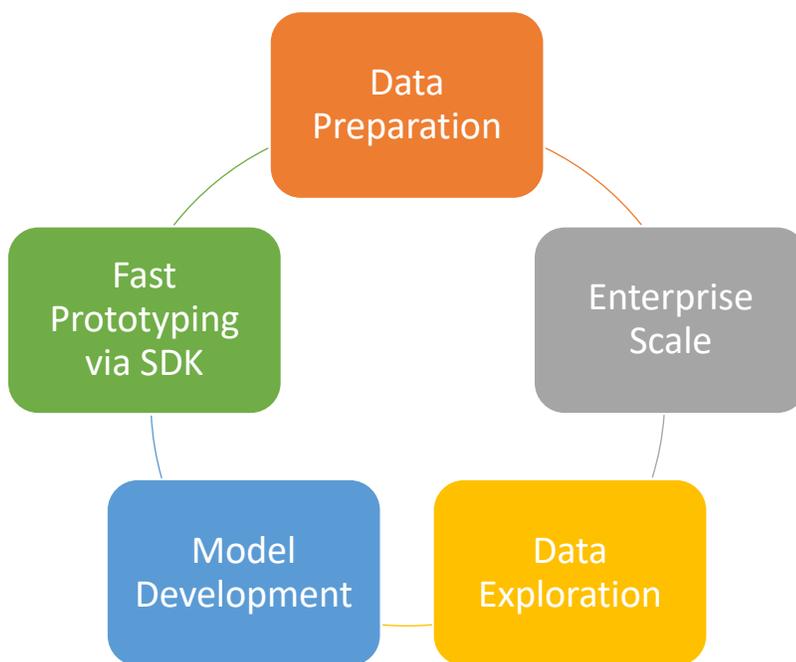# AyasdiAI vs. Open Source TDA

The Symphony AyasdiAI technology and platform has been at the forefront of innovation in Topological Data Analysis and Machine Learning for the past decade. We have invested $100 million in R&D to build an enterprise ready product for the most highly regulated industries on the planet. Today a data scientist may claim that they can perform the functions and capabilities that AyasdiAI is providing but they will always fall short of this claim in a real-world setting. Areas of data science where AyasdiAI's platform sets itself apart from open source are:

Data Preparation: The platform can handle both text and numeric data with sparsity; integrating large amounts of heterogeneous and diverse data sets into common data and modelling environment at enterprise scale.

Enterprise Scale: AyasdiAI's platform is optimized for computations on big datasets, having successfully tested the platform on up to 25 million rows for segmentation vs the open source TDA which is a rudimentary software codebase that cannot handle large datasets with consistency.

Data Exploration: Interactive workbench that allows users to highlight hotspots and compare those with other data points for insights which is missing in an open source code base.

Model Development: AyasdiAI's platform has auto model generation framework that iterates through combinations of metric and filters to suggest the most optimum. These processes learn and improve over time to maximize optimal model generation.

Fast Prototyping via SDK: Ayasdi SDK gives users access to a large code base that is extensively tested for fast prototyping and easy integration into their existing codebase.

There is a whole another set of criteria when it comes to enterprise suitability and readiness. Our years of experience working along the US government, financial and health institutes have tested our data security infrastructure and scale readiness time and time again. AyasdiAI's platform is built as an

enterprise-grade software with high availability guarantee, user management, data security, team collaboration, multi-tenancy (can accommodate up to 1000 or more users), capabilities open source can never provide. These requirements can be summed up in the following 4 criteria:

Regulated Market	• Fully compliant with regulatory reporting and transparency requirements across multiple jurisdictions. • Full explanability and consistent documentation throughout the entire data management, model creation and results continuum.
Enterpise Readiness	• Both enterprise ready and globally deployed ensuring enterprise deployment readiness against any alternatives. • Tested and approved against enterprise class volume, resiliency, security, audit and reporting requirements out of the box.
Team Productivity	• Fully deployed multi-user workbench enabling global teams to ideate, prototype, test and deploy as a single unit in a globally consistent workflow and process to drive team productivity an order of magnitude higher than individual focused projects.
Multiple Business Challenges	• Consistently leverageable against any number of business problems as an Enterprise class platform - includes AML, human and wildlife trafficking, cyber crime, fraud and tax evasion, churn and multiple other customer predictive and inferred behaviors – driving a cost improvement vs ad hoc projects of over 60%.

A head-to-head comparison between the Ayasdi AI platform and open source data science tools always results in the same conclusion: open source does not stack up. It will always fall short in many necessary areas for enterprise-scale data science. In order to reap the full benefit of AI powered solutions for your enterprise, choose Symphony AyasdiAI.