

ATORUS RESEARCH

THE POWER OF A TRUSTED PARTNER

Atorus is the expert in R Programming, Validation and Environment Construction and Deployment



OVERVIEW

Services Provided:

- Package Development and Validation
- Support Continuous Integration and Continuous Deployment (CI/CD) Pipeline for Package Development and Environment Validation

Challenge: The Client developed an R Package internally. When COVID-19 occurred, the Client had to pull all internal programmers and assign them to other projects. This left the package unfinished. The Client approached Atorus to finish the development of the package.

Why Atorus: The Client approached Atorus after they had reviewed our package Tplyr on Github and CRAN. Tplyr was released in May 2020 and included not only the package but the validation documentation as well. The Client's package was functionally similar to Tplyr, with different interfaces and was not quite as robust.

Package Specifications: The package takes SDTM and ADaM data and converts it to a presentation ready table, compliant with the organization's standards group's specifications. The package performs a variety of counting and descriptive statistics.

Package Validation Process: Beyond their internal package, this organization also needed assistance with the validation and release of open-source packages within their environment. This process needed to remain flexible and able to quickly adapt to change of the environment over time.

R Environment Construction and Deployment: The Client is centralizing their R environment within the same validated platform in which their SAS environment lives, hosting the R environment within containers. In doing so they need the validation documentation for the R environment and package validation documentation ready to go.

After establishing this relationship and the Client recognizing Atorus' unique skill set in the industry, not only was Atorus asked to help develop and validate the Client's package; the services expanded to CI/CD Pipeline Deployment of the validated R programming environments.



ACCOMPLISHED DELIVERY OUTCOMES

Atorus completed the development and validation of the package. Atorus was able leverage the R package valtools (developed within PHUSE with significant Atorus contribution) to create validation documents for the container environments. Atorus became a trusted partner in helping this Client set the foundation for their future by applying our expertise to their already established package and environment. With the improvements that were made, we worked with the Client and were able to enhance and optimize their code base, reducing execution times and simplifying the process of enhancements. These enhancements lead to a reduction in manual errors and allowed for a streamlined future process of expanding the R programming environment across the organization on a go forward basis.

Furthermore, Atorus worked with the Client to expand this package validation process, both for internally developed and open-source packages. Atorus unified the process, bringing consistency to both internally developed and open-source packages. This process fits directly within the Clients CI/CD Pipeline and automates testing within the R environments, allowing for flexible and extensible validated environments.



FUNCTION FILES ↓ 40%
LINES OF CODE FOR EACH
TABLE ↓ 30%