

Christophe Ladroue
Quantics

Surfacing implementation and data quality issues with Diverse Self-Checking Pair (DSCP) programming

Incorrect analysis and bad data quality can have disastrous consequences in the pharmaceutical industry, and it is therefore paramount to minimise the risk of those occurring. Inspired by practices from the aerospace industry, Quantics routinely use Diverse Self-Checking Pair programming for implementing statistical analyses: two independent teams program the same analysis from the same high-level specification document and the results are compared. If they don't match, at least one implementation is incorrect.

This approach is tremendously powerful for surfacing implementation and interpretation errors during programming. But we also found that it has been very useful for uncovering issues and ambiguities in the data we receive from clients for analysis. We will present a few, anonymised but real, examples.