**Score Partition Summary**

This code partitions observations into categories defined by numeric boundaries. Observations are REAL numbers at the interval level. Each partition boundary assignment set has an associated value called a “score” for that partitioning. This code finds observation boundaries such that the score is maximized.

The Python code here uses “maximum R2” as a partitioning score value, and finds partition with boundaries that maximize that R2 value across all other partitions. A brute-force search is used to find the maximum.

**History**

The original “simplified” version of this code came from statistician Alan Bostrom in the late 1980’s, while working at Iameter, and was written In Visual Basic. It was translated into C++ and somewhat optimized for production use. It was later translated to Java in the late 90’s. This is a Python version.

**Computational Equivalences used in the Maximization Process**

Categories are evaluated with respect to a “metric” to define the best selection. The “maximum R2” criterion is computed using these equivalences:

*SS Total = SS Within + SS Between*

*SSWithin = SSErrors = SSResidual*

*SSBetween = SSExplained*