Glass Chemical Dataset

The dataset was made available for download from the UCI Machine Learning Repository and was created by the USA Forensic Science Service. The purpose of this dataset is to use physicochemical properties to classify whether a certain glass fragment comes from a window or not. The matrix of inputs contains 214 observations of 9 variables. Of these variables, eight of the nine measure the percent weight that a given elemental oxide makes up of the total glass sample weight. All the eight elements except silicon are classified as metals on the periodic table of elements. Sodium and potassium are alkali metals whereas magnesium, calcium, and barium alkaline earth metals. Aluminum and iron are classified as poor metals and transition metals, respectively. The last variable in the input matrix represents the refractive index which measures the speed of light in a transparent medium and is known as Snell’s law. It can be represented formulaically as the ratio of the velocity of light in a vacuum to the velocity of light in the glass itself: The matrix of targets has dimensions 2x214 where a given target is if the glass sample comes from a window and otherwise.

BibTeX citation:

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author={Murphy, P.M. and Aha, D.W},

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