



Glass Identification

Donated on 8/31/1987

From USA Forensic Science Service; 6 types of glass; defined in terms of their oxide content (i.e. Na, Fe, K, etc)

Dataset Characteristics

Multivariate

Subject Area

Physics and Chemistry

Associated Tasks

Classification

Feature Type

Real

Instances

214

Features

9

Dataset Information



Additional Information

Vina conducted a comparison test of her rule-based system, BEAGLE, the nearest-neighbor algorithm, and discriminant analysis. BEAGLE is a product available through VRS Consulting, Inc.; 4676 Admiralty Way, Suite 206; Marina Del Ray, CA 90292 (213) 827-7890 and FAX: -3189. In determining whether the glass was a type of "float" glass or not, the following results were obtained (# incorrect answers):

Type of Sample -- Beagle -- NN -- DA

Windows that were float processed (87) -- 10 -- 12 -- 21

Windows that were not: (76) -- 19 -- 16 -- 22

The study of classification of types of glass was motivated by criminological investigation. At the scene of the crime, the glass left can be used as evidence...if it is correctly identified!



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Variables Table



Variable Name	Role	Type	Description	Units	Missing Values
Id_number	ID	Integer			no
RI	Feature	Continuous	refractive index		no
Na	Feature	Continuous	Sodium	weight percent in corresponding oxide	no
Mg	Feature	Continuous	Magnesium	weight percent in corresponding oxide	no
Al	Feature	Continuous	Aluminum	weight percent in corresponding oxide	no
Si	Feature	Continuous	Silicon	weight percent in corresponding oxide	no
K	Feature	Continuous	Potassium	weight percent in corresponding oxide	no
Ca	Feature	Continuous	Calcium	weight percent in corresponding oxide	no
Ba	Feature	Continuous	Barium	weight percent in corresponding oxide	no



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Additional Variable Information



1. Id number: 1 to 214
2. RI: refractive index
3. Na: Sodium (unit measurement: weight percent in corresponding oxide, as are attributes 4-10)
4. Mg: Magnesium
5. Al: Aluminum
6. Si: Silicon
7. K: Potassium
8. Ca: Calcium
9. Ba: Barium
10. Fe: Iron
11. Type of glass: (class attribute)
 - 1 building_windows_float_processed
 - 2 building_windows_non_float_processed
 - 3 vehicle_windows_float_processed
 - 4 vehicle_windows_non_float_processed (none in this database)
 - 5 containers
 - 6 tableware
 - 7 headlamps

SHOW LESS ^

Class Labels

- 1: building_windows_float_processed
- 2: building_windows_non_float_processed
- 3: vehicle_windows_float_processed
- 4: vehicle_windows_non_float_processed (none in this database)
- 5: containers
- 6: tableware
- 7: headlamps

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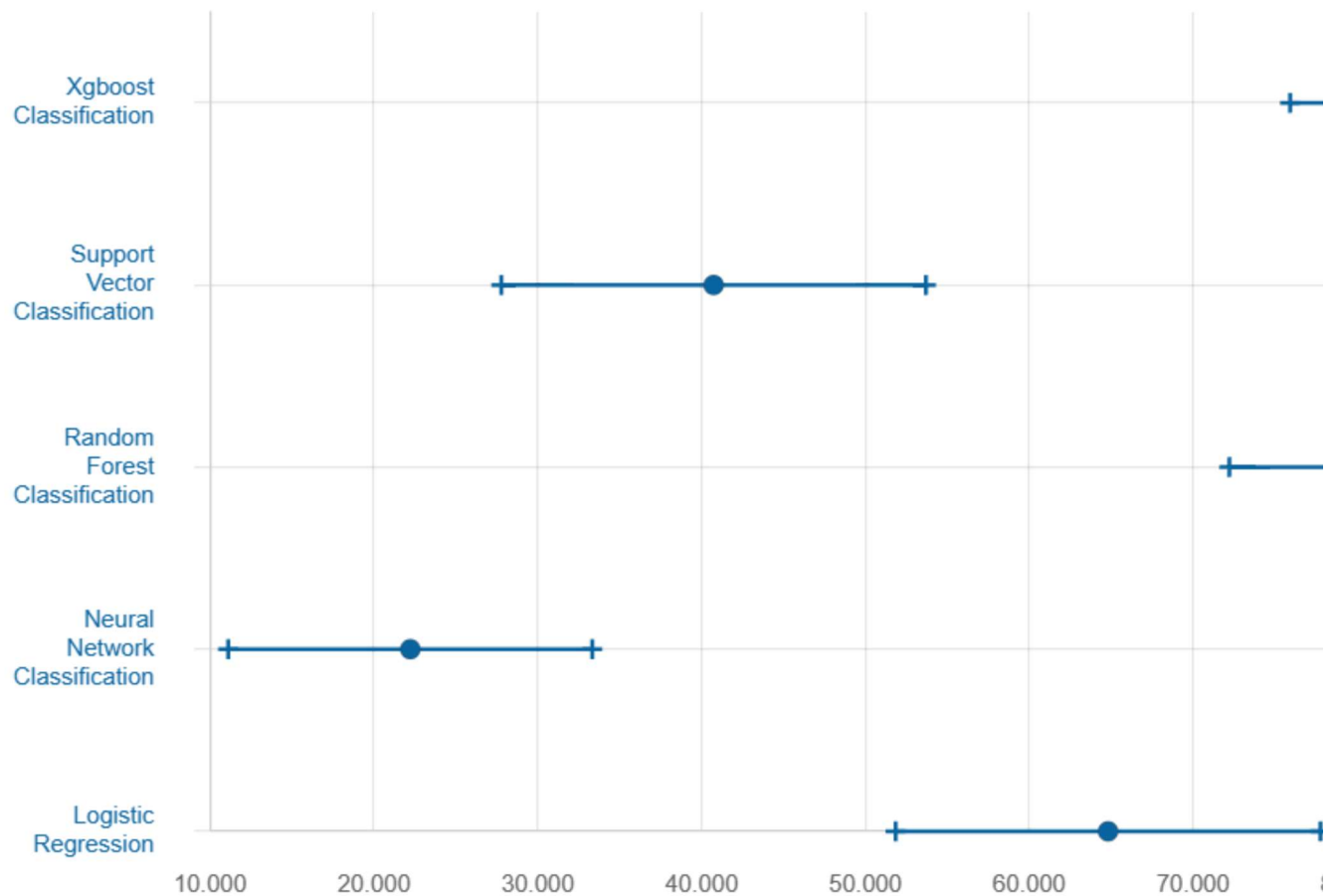


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Accuracy

Precision



Papers Citing this Dataset



SORT BY YEAR, DESC

[Search Based Code Generation for Machine Learning Programs](#)

By Muhammad Malik, Muhammad Nawaz, Nimrah Mustafa, Junaid Siddiqui. 2018
Published in ArXiv.

[MIME-KNN: Improve KNN Classifier Performance Include Classification Accuracy and Time ...](#)

By Taizhang Shang, Xiang Xia, Jun Zheng. 2018
Published in DEStech Transactions on Computer Science and Engineering

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[Three Similarity Measures between One-Dimensional Data Sets](#)

By Luis Gonzalez-Abril, José Gavilán, Francisco Morente. 2014

Published in Revista Colombiana de Estadística.

[An Outlier Mining Algorithm Based on Attribute Entropy](#)

By Ming-jian Zhou, Jun-Cai Tao. 2011

Published in Procedia Environmental Sciences.

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Reviews



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