Supervised Machine Learning Algorithm to Predict the Outcome of Shelter Animals

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Machine learning is the ability for a computer to learn and adapt from experience rather than from code that is already in its program. More specifically, supervised machine learning takes data from the past and uses it in tandem with an algorithm in order to predict future outcomes. For this, a labeled data set is used to specifically guide the machine on what to read. The learning algorithm can also compare its predicted data with the actual data and make improvements to modify its code. The type of supervised machine learning will be utilizing is a type that uses decision trees. A decision tree is a flowchart that uses branching choices and outcomes in order to make decisions about which direction the algorithm should go. Using a supervised machine learning algorithm in order to make a program that predicts whether or not an animal will be returned to the owner, euthanized, adopted, transferred, or die from natural causes based upon their breed, animal type, sex upon the outcome, age upon the outcome, and color. Using a data set of 26,729 animals, with all of these different variables and outcomes, in order to train the machine. The NaN or null values will be excluded to ensure quality in the data. 80 percent of the data will be used to train the machine while the other 20 percent will be used to test the machine.

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