Autistic Spectrum Disorder (ASD) cases

Description and Preprocessing of Data

The Autism-Adult-Data.arff is made up of 704 rows and 21 columns. The columns are as follows:

* A1\_Score - Question 1 Answer: Binary (0, 1)
* A2\_Score - Question 2 Answer: Binary (0, 1)
* A3\_Score - Question 3 Answer: Binary (0, 1)
* A4\_Score - Question 4 Answer: Binary (0, 1)
* A5\_Score - Question 5 Answer: Binary (0, 1)
* A6\_Score - Question 6 Answer: Binary (0, 1)
* A7\_Score - Question 7 Answer: Binary (0, 1)
* A8\_Score - Question 8 Answer: Binary (0, 1)
* A9\_Score - Question 9 Answer: Binary (0, 1)
* A10\_Score - Question 10 Answer: Binary (0, 1)
* Age - Age in years
* Gender - Gender (m: Male, f: Female)
* Ethnicity - List of common ethnicities (White-European, Latino, Others, Black, Asian, Middle Eastern, Pasifika, South Asian, Hispanic, Turkish). I removed this variable because there is not enough data to recognise patterns between ethnicities
* Jundice - Whether the case was born with Jundice (Yes, No)
* Austim - Whether any immediate family member has a PDD (Yes, No)
* Country\_of\_res - Country of residence (List of countries)
* Used\_app\_before - Whether the user has used the screening app before (Yes, No). A high percentage of this variable was no, therefore this variable was dropped for lack of predictive power.
* Result - Screening score: The final score obtained based on the scoring algorithm of the screening method used. This was computed in an automated manner
* Age\_desc - Age description. This variable was dropped as a high number was extremely similar.
* Relation - Who is completing the test (Self, Parent, Health care professional, Relative, etc). A high percentage of the relations were self, so this variable would not have great predicting power.
* Class/ASD - yes, no

Project Description

The aim for this project was to predict whether an adult has Autism using a Machine Learning Classification Model. The Model created was able to correctly predict approximately 98% of data it had not seen.