ASD Factor Analysis

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Overview

- What Is Autism Spectrum Disorder (ASD)
- Our Goal
- Data Understanding
- Methods
- Best Model
- Results

What Is ASD?

- ASD is a developmental disability
- ASD changes the way a person experiences the world
- Autistic people are not 'broken'

Our Goal

- Examine factors indicating someone is more likely to be diagnosed
- Encourage people to educate themselves about ASD
- Encourage those suspecting they're autistic to seek diagnosis
- **Our Goal Is Not To Diagnose**

Data Understanding

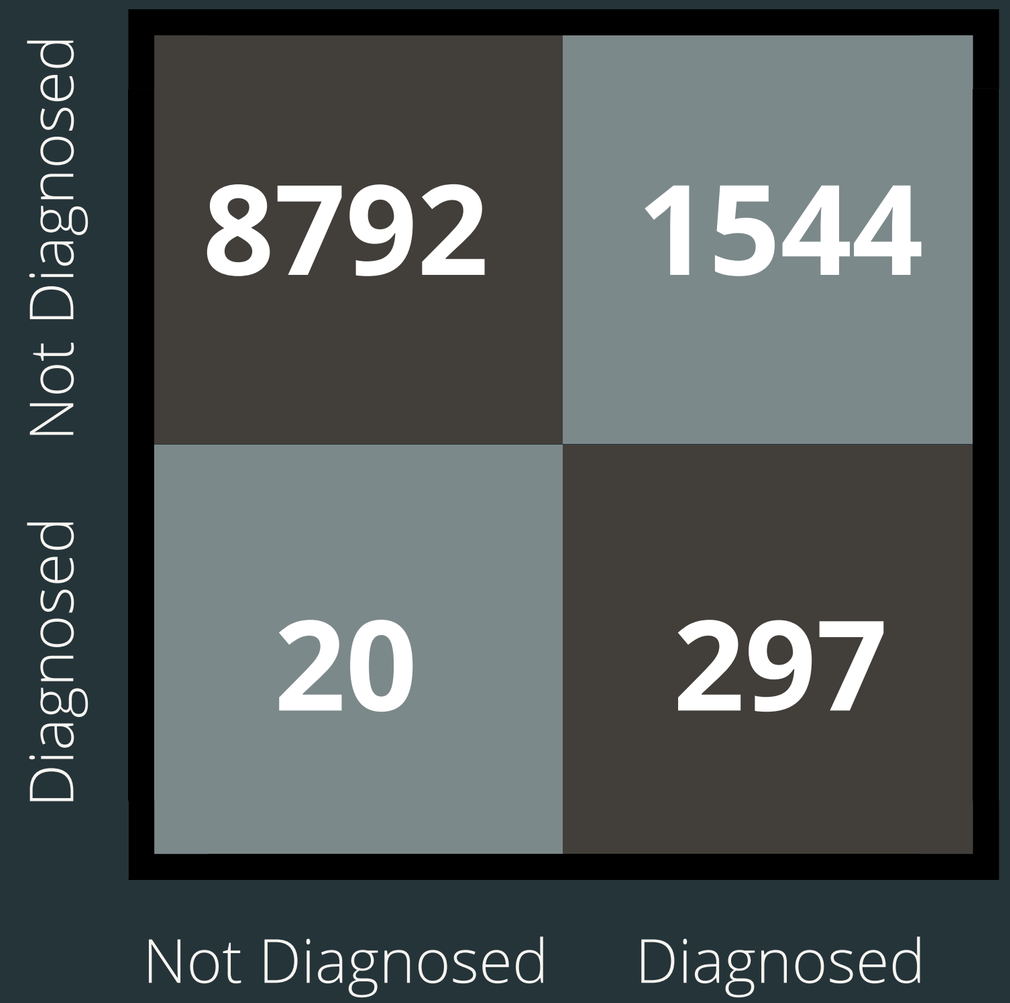
- Used data from National Survey of Children's Health for 2020
- Details medical, social, and environmental factors for 42,777 children
- Data pertains only to children
- Data relies on diagnosis

Methods

- Cleaned Data
- Made models predicting if a child has been diagnosed with ASD
- Examined feature importance from the best model

Best Model

- Decision Tree Classifier
- 85.3% Accuracy
- 93.7% Recall
- 16.1% Precision



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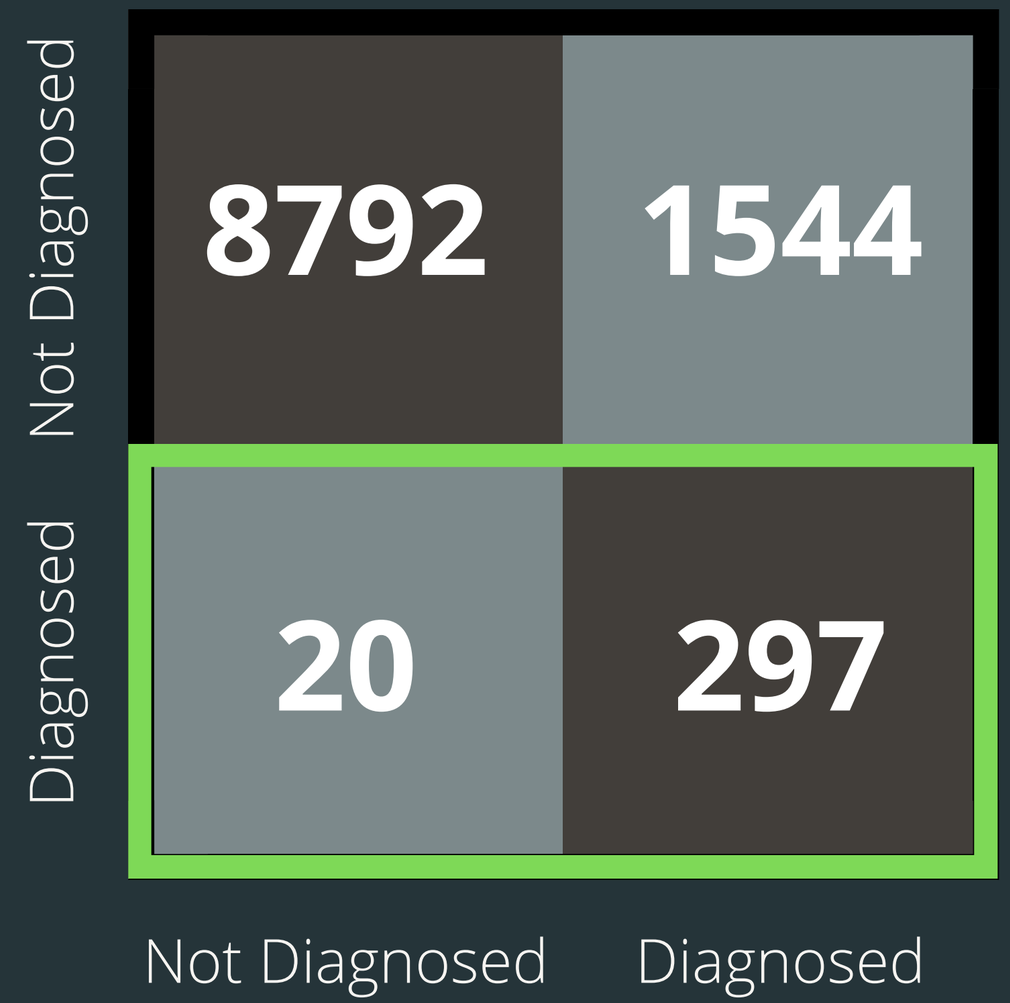

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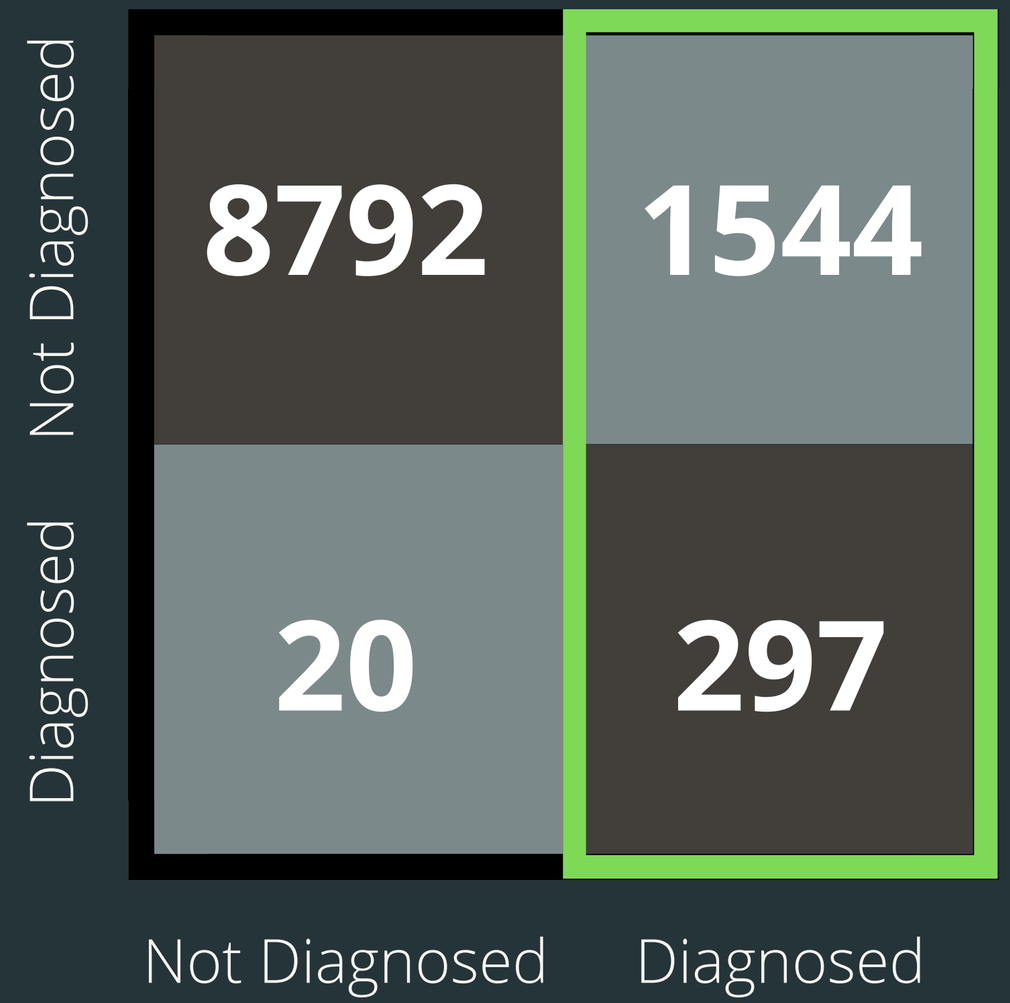

Results

- Examined the features our decision tree found important
- Can be reduced to two main factors:
  - Does this child need extra support in areas such as communication?
  - Can this child receive mental healthcare?

Thank You

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Project Repository:
https://github.com/pjlannoo/ASD-Factors-ML