Identifying Undiagnosed ADHD

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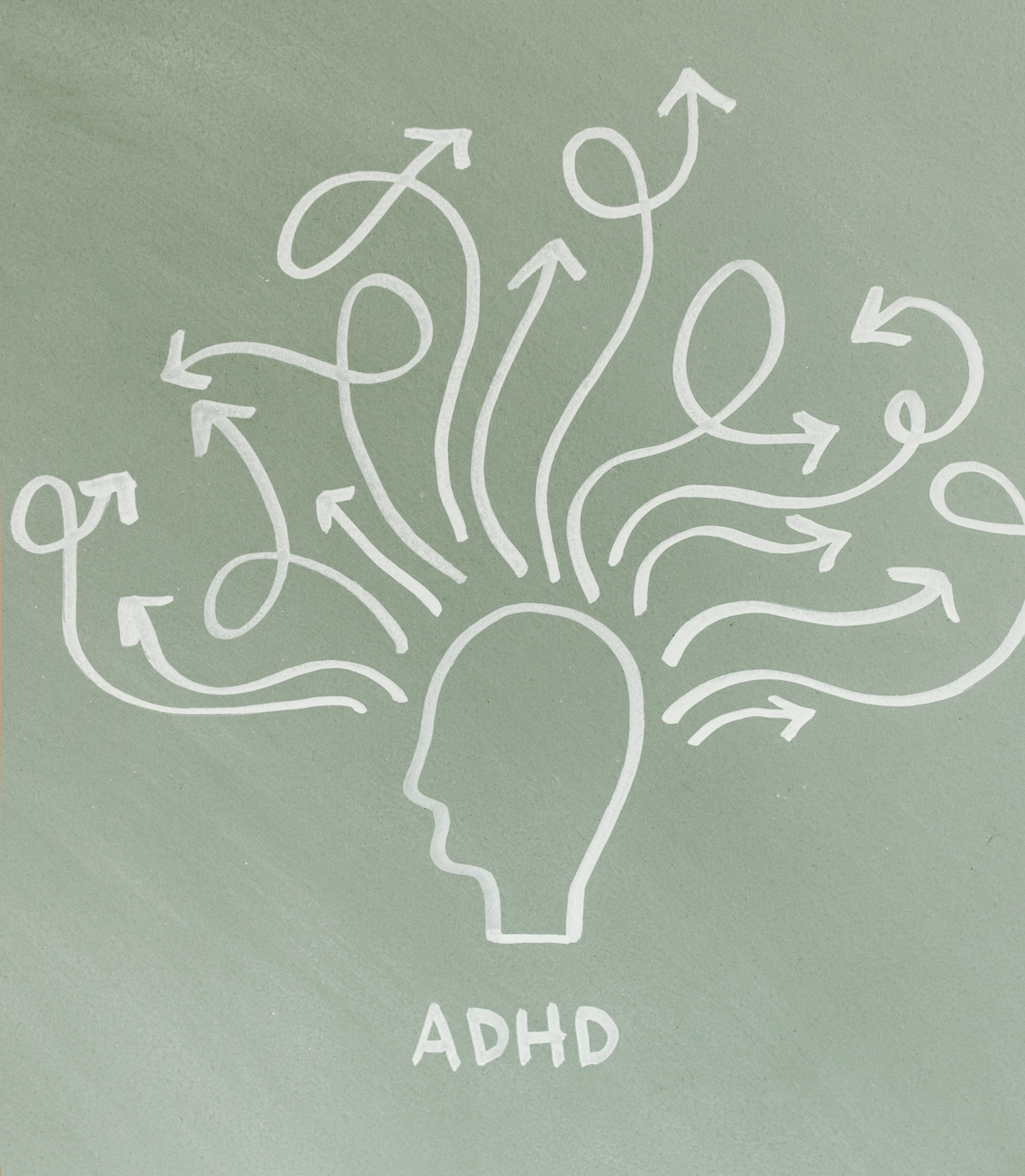


Problems

It is estimated that **10%** of people in the US have ADHD, but only **2%** have received a diagnoses.

- **Not Well Understood**
- **Diagnosing ADHD**
- **Portrayal in Media**

Solutions

Use machine learning to create a tool that can give the probability that a child has ADHD.

Learn from real Examples

More Easily Accessable

No Media Bias

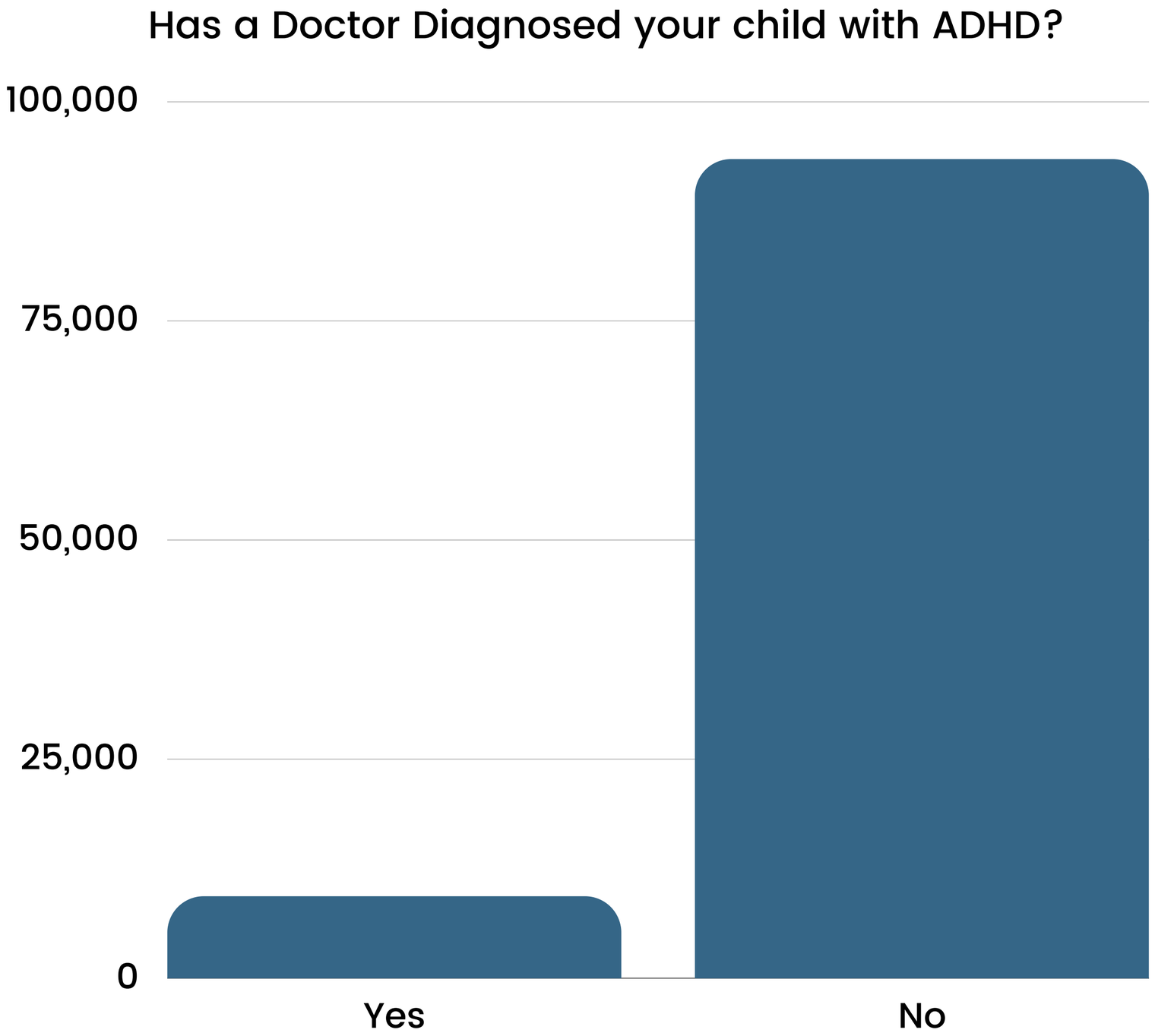
NSCH Data

Survey on the physical and emotional health of children 0 - 17 years old in the US.

Survey Topics

- Child and Family Characteristics
- **Physical and mental health status**
- Health Insurance Status

Prediction Target



Cost of Errors

What do different errors mean in this context?

False Positive

The model identifies a child who **is not diagnosed with ADHD** as **diagnosed**

False Negative

The model identifies a child who **is diagnosed** with ADHD as **undiagnosed**

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What do different errors mean in this context?

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Model

Catboost was the pest performing model:

90%

ACCURACY

47%

PRECISION

90%

RECALL

Model

Catboost was the pest performing model:

The model correctly classifies all children in the set 90% of the time

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When it predicts a child is diagnosed with ADHD, it is correct 47% of the time

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It correctly identifies 90% of all children diagnosed with ADHD

Model

Catboost was the pest performing model:

The model only misclassified 60 of the 600 kids diagnosed with ADHD in the validation data set

Next Steps

What can be done with this model?

Deploy → Adapt → Outreach

Thank You

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