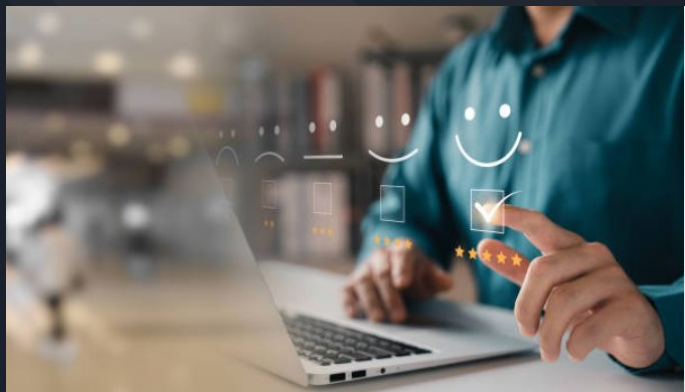# Predicting employee attrition for IBM

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Data Scientist

Situation & Project Goal

Problem

- **Tough** recruiting market
- **High** employee turnover
- Resignations come at surprise

Solution

- **Identify** employees who might want to **leave** the company
- Find out **factors** that drive **resignations**
- Enable strategic HR **interventions**

The data

- Internal data with > 1400 employees

- **Attrition yes vs. no**

- Information about
  - Demographics
  - Position
  - History in company
  - Satisfaction scores
  - Performance
  - Educational background

Attrition distribution
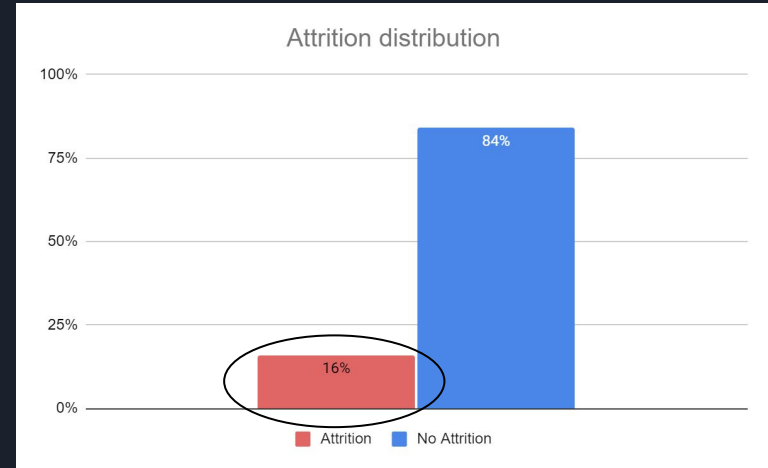
Method & Evaluation

- Classification task (attrition yes vs. no)

- Random Forest Classifier

- Focus on predicting the actual leavers → **Recall**

- Accept false positives

- Final model has a **recall of 0.71**

Confusion Matrix
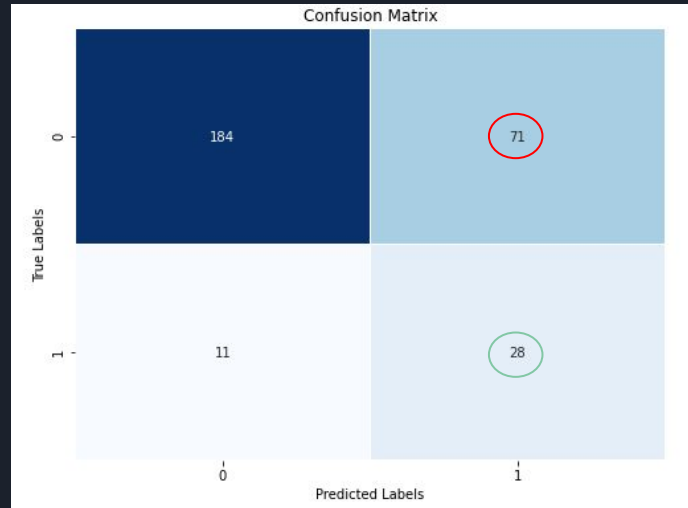
Limitations & next steps

- Model identifies too many non-leavers

- Gather more data

- Design review process

- Review HR policies

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