

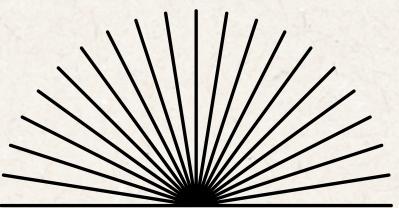
MIT

Academy of
Engineering

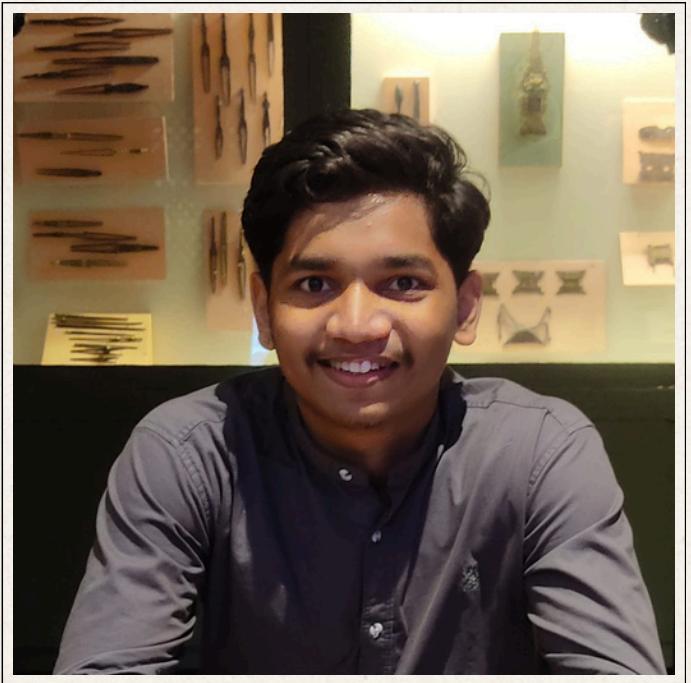
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

CI Project

EMPLOYEE ATTRITION PREDICTION



Our team



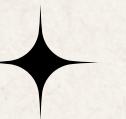
Aditya Ambure

202301070154



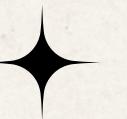
Sneha Kabra

202301070162



Devang Deshmukh

202301070170



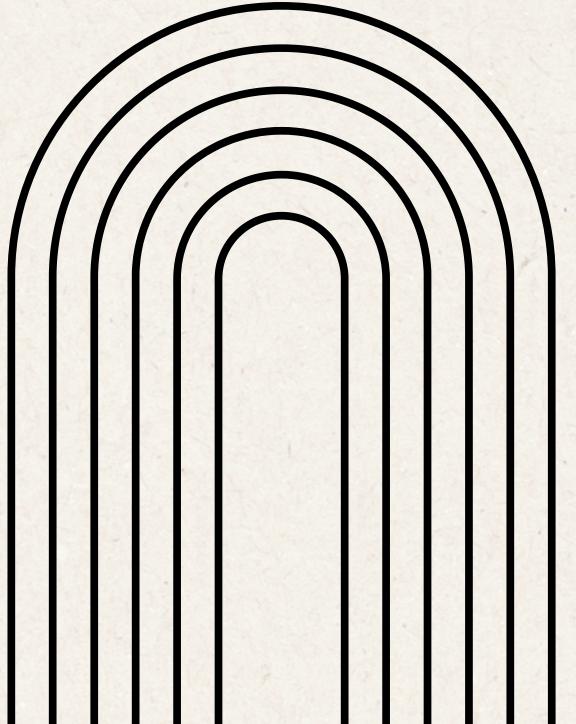
Krishna Kedar

202301070177

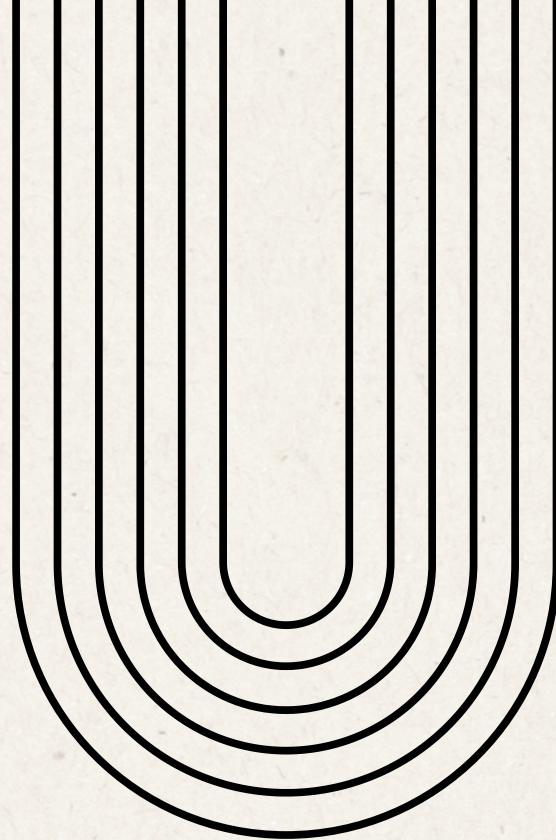


Overview

- ML model to predict employee attrition
- Synthetic 14,000-row dataset
- Features: Demographics, Job details, Satisfaction
- Algorithms: RF, GB, LR, DT



Data Processing



- Train-test split + Scaling

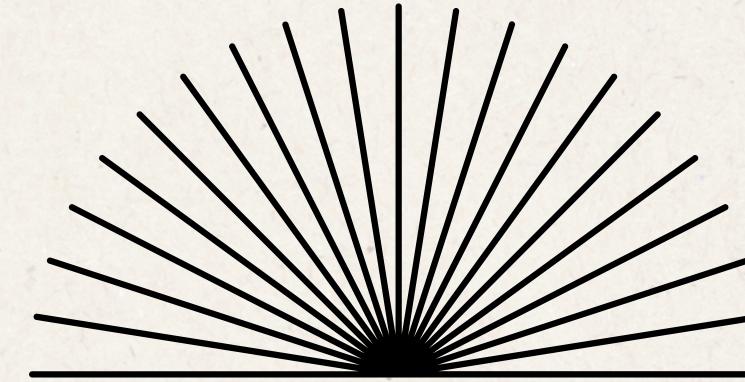
01 • SMOTE balancing

02 • Missing value handling

03 Elaborate on the first
goal here..• Feature
engineering

04 • One-hot encoding

Deployment



1

- Streamlit multi-page premium app

2

- Supports single + batch prediction

3

- Docker + Cloud deploy ready

Modelling



Stage 1

Compared 4 models

Stage 2

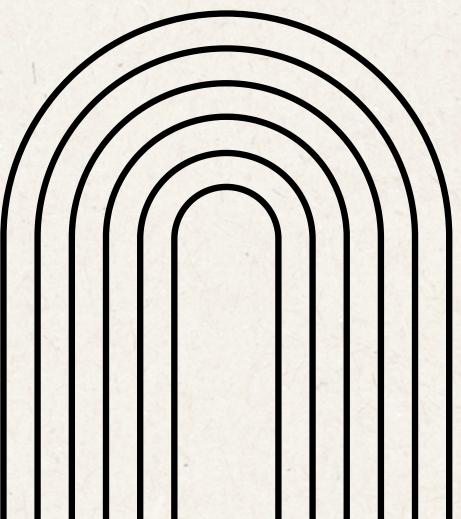
Tuned Random Forest with
RandomizedSearchCV

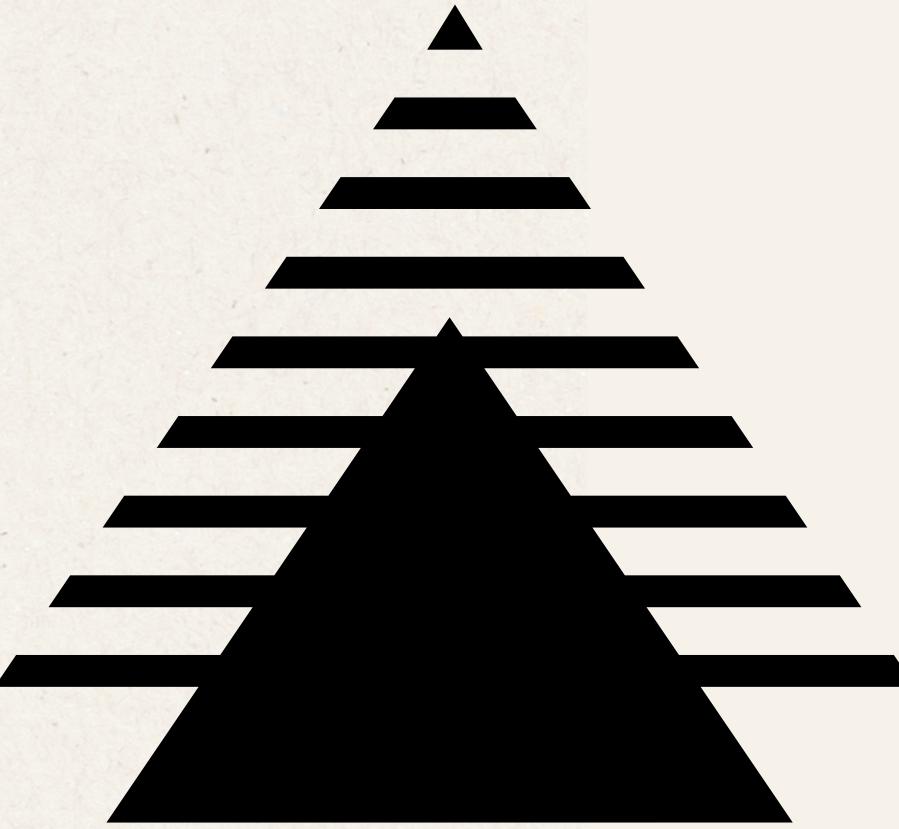
Stage 3

Best model saved as PKL

Stage 4

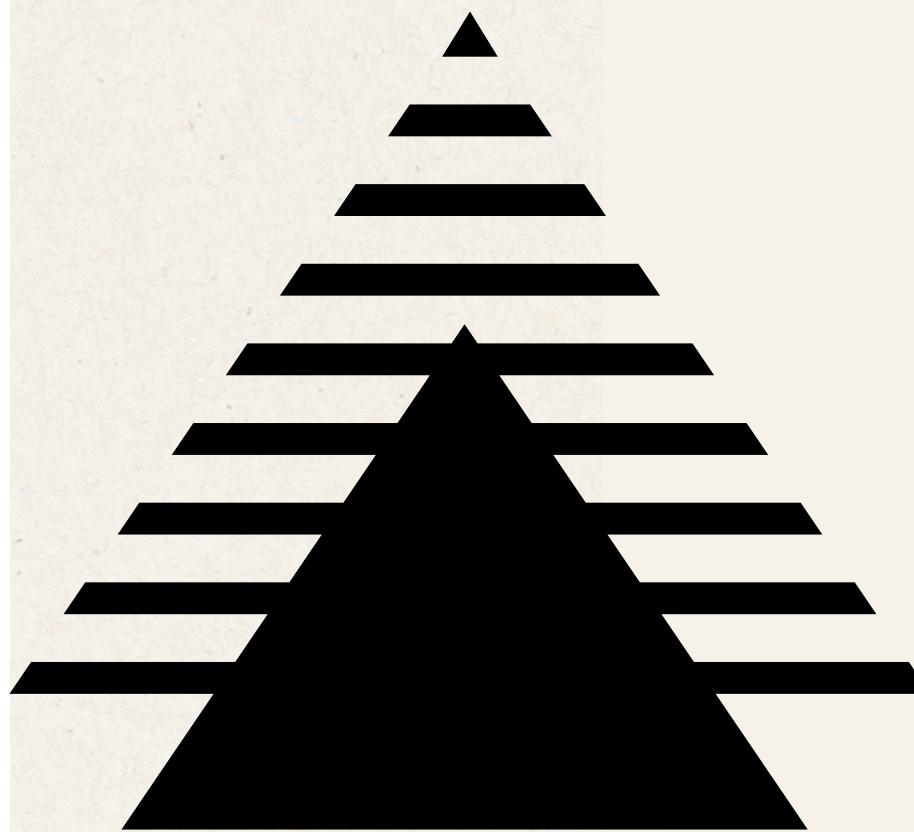
Streamlit deployment
ready





Results

- High accuracy & ROC-AUC
- Feature importance extracted
- Dashboard + Explainability (SHAP)



Demonstation

[https://attrition-app-premium-
7vwldhkdyyqwsuyfbb4xfa.streamlit.app](https://attrition-app-premium-7vwldhkdyyqwsuyfbb4xfa.streamlit.app)

THANK YOU