



# Random Over-sampling

# Random Over-sampling

Extracts observations at random from the minority class, until a certain balancing ratio is reached.

Naïve technique

# Random Over-sampling - duplication

Extracts observations at random from the minority class, with replacement.

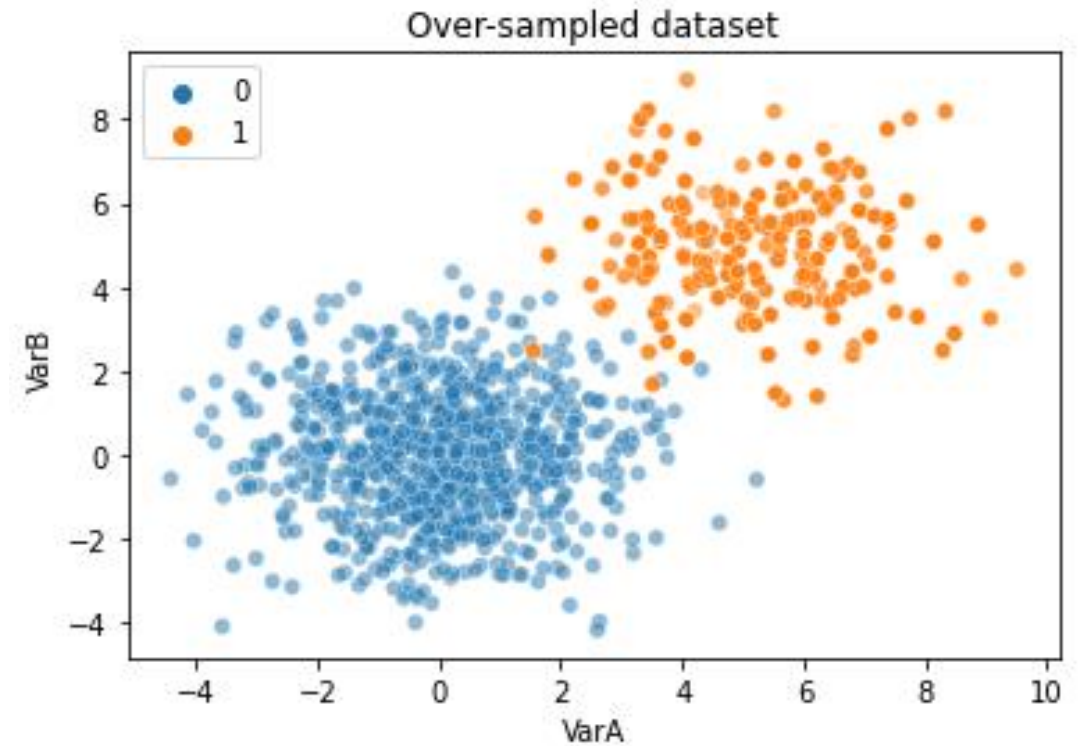
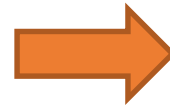
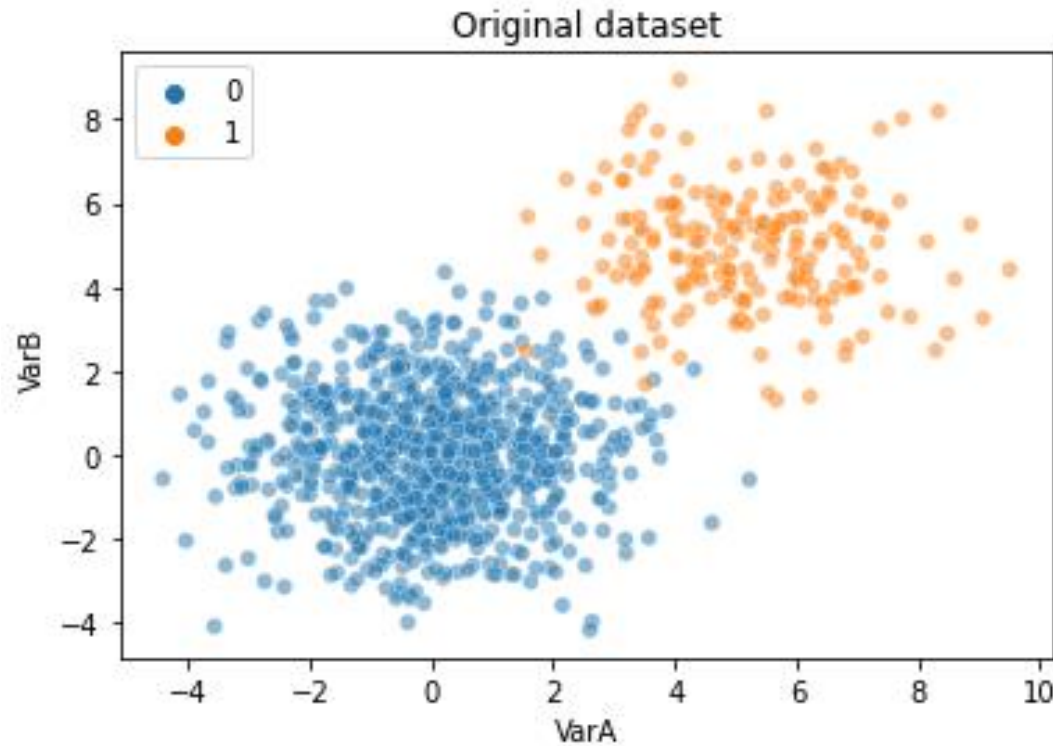
Duplicates samples from the minority class.

➔ Increase likelihood of over-fitting

# Imbalanced-learn: RandomOverSampler

```
ros = RandomOverSampler(strategy = 'auto', random_state = 29)  
X_res, y_res = ros.fit_resample(X, y)
```

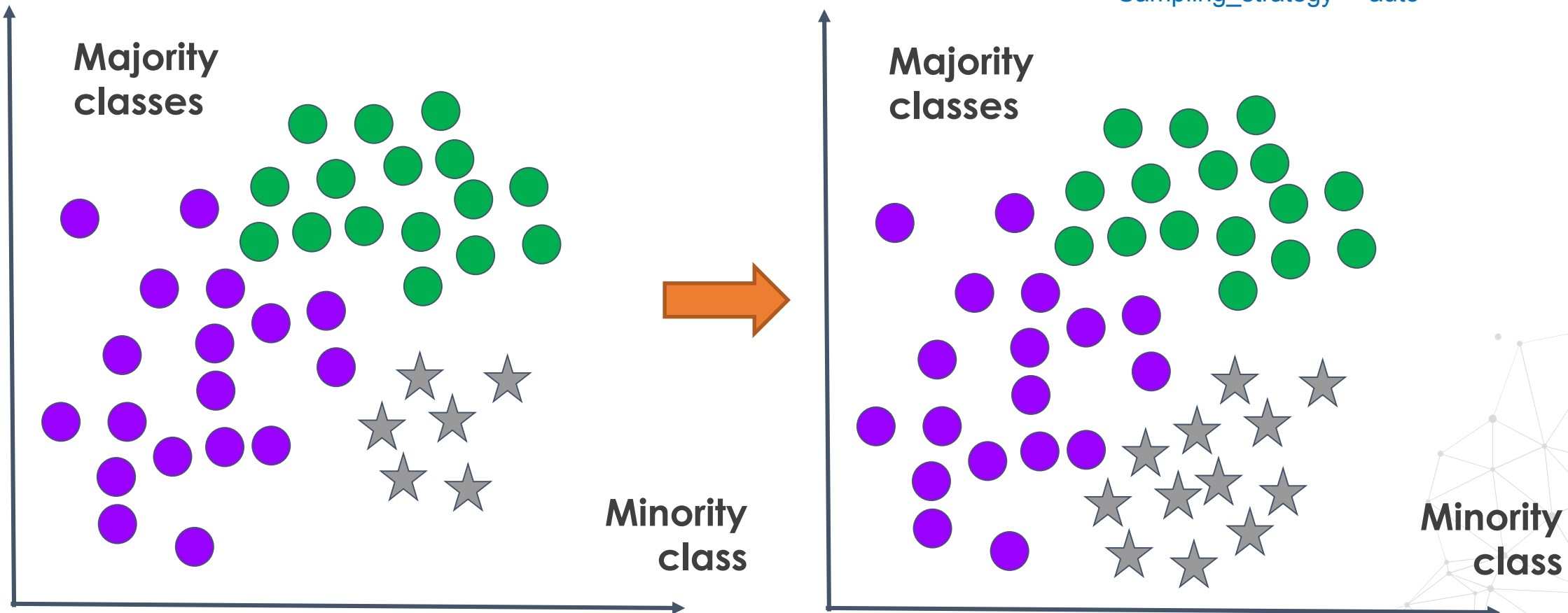
# Imbalanced-learn: RandomOverSampler



# Multi-class

Only 1 minority class

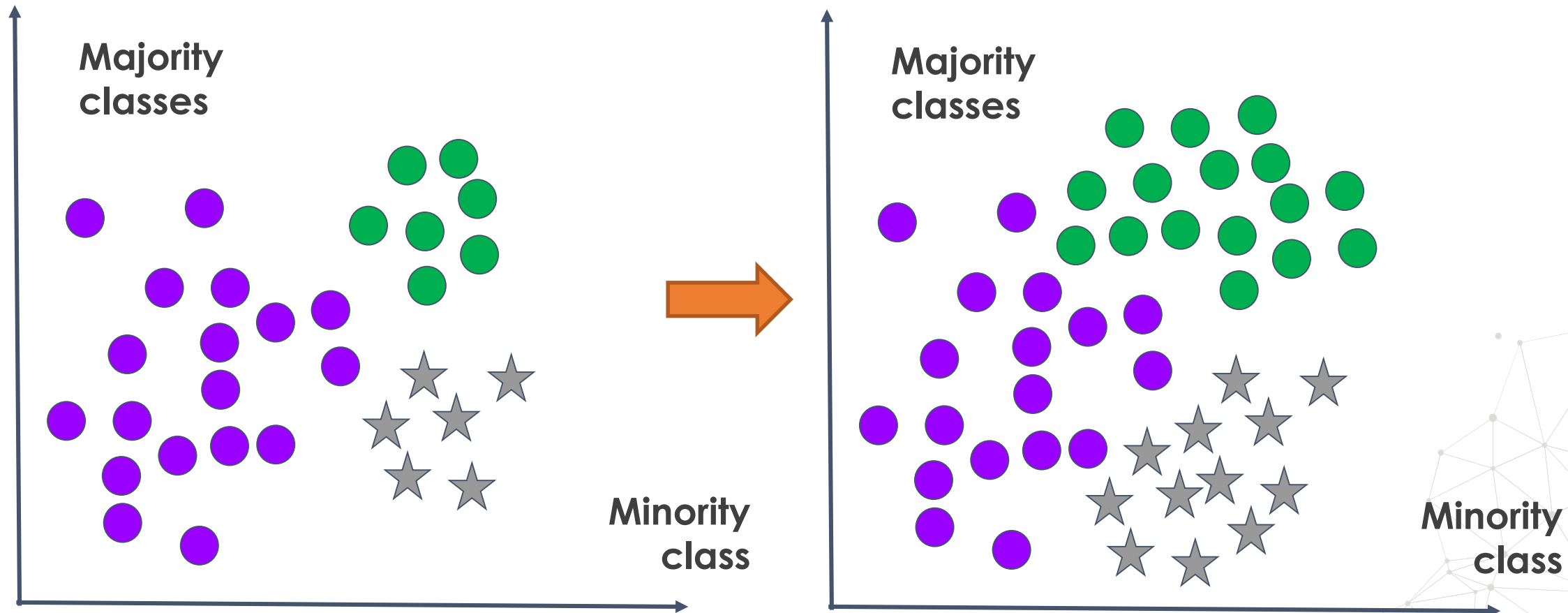
Sampling\_strategy = 'auto'



# Multi-class

Several minority classes

Sampling\_strategy = 'not majority' or dictionary



# THANK YOU

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