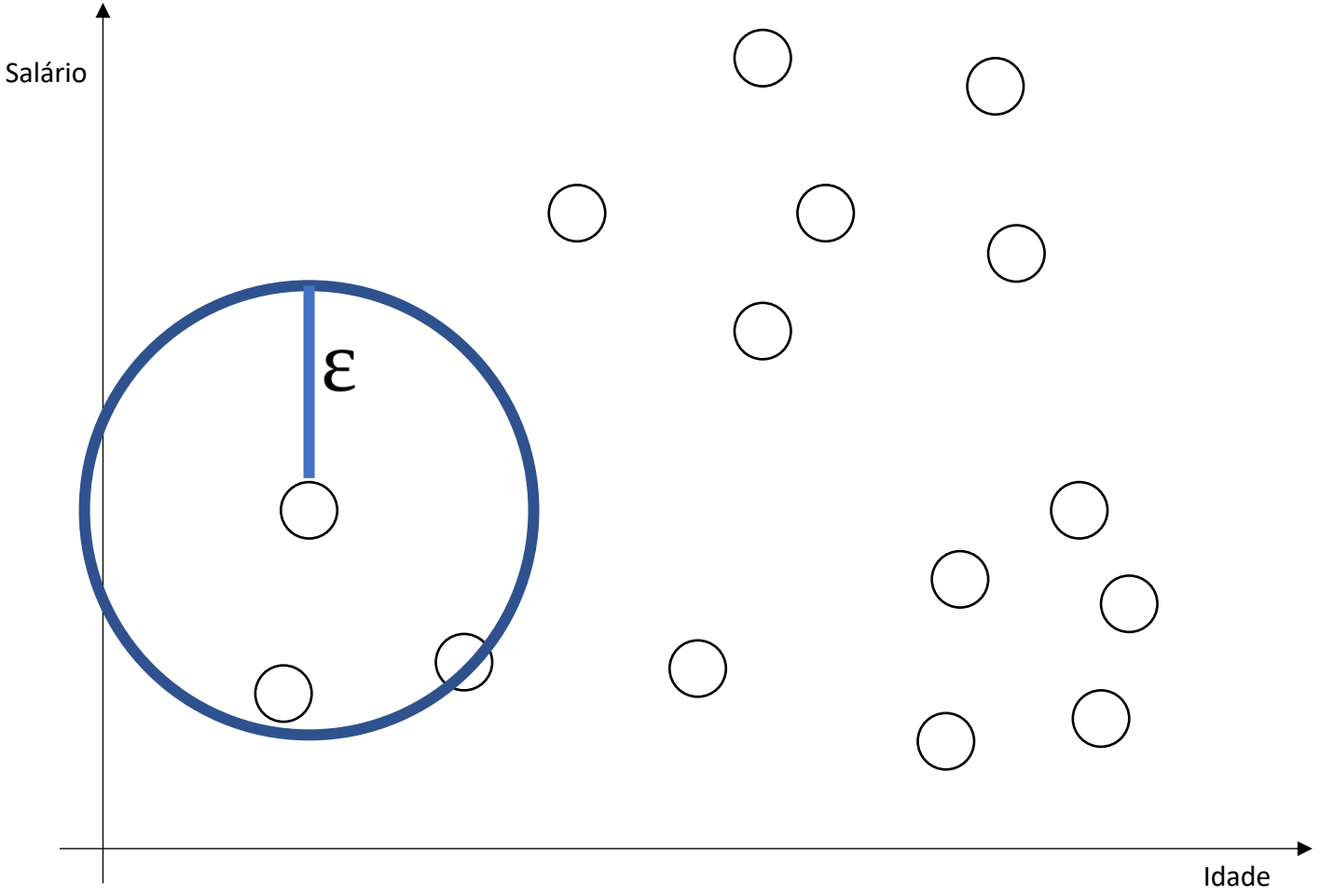
Agrupamento com DBSCAN

Jones Granatyr

DBSCAN

- Density-Based Spatial Clustering of Applications with Noise
- Baseado em densidade, agrupando os pontos similares no mesmo espaço
- Não é necessário especificar o número de clusters
- Em geral apresenta melhores resultados que o k-means
- Mais rápido que o k-means
- Tenta encontrar os pontos que são separados por uma distância não maior do que um limiar (threshold distance)

Algoritmo DBSCAN



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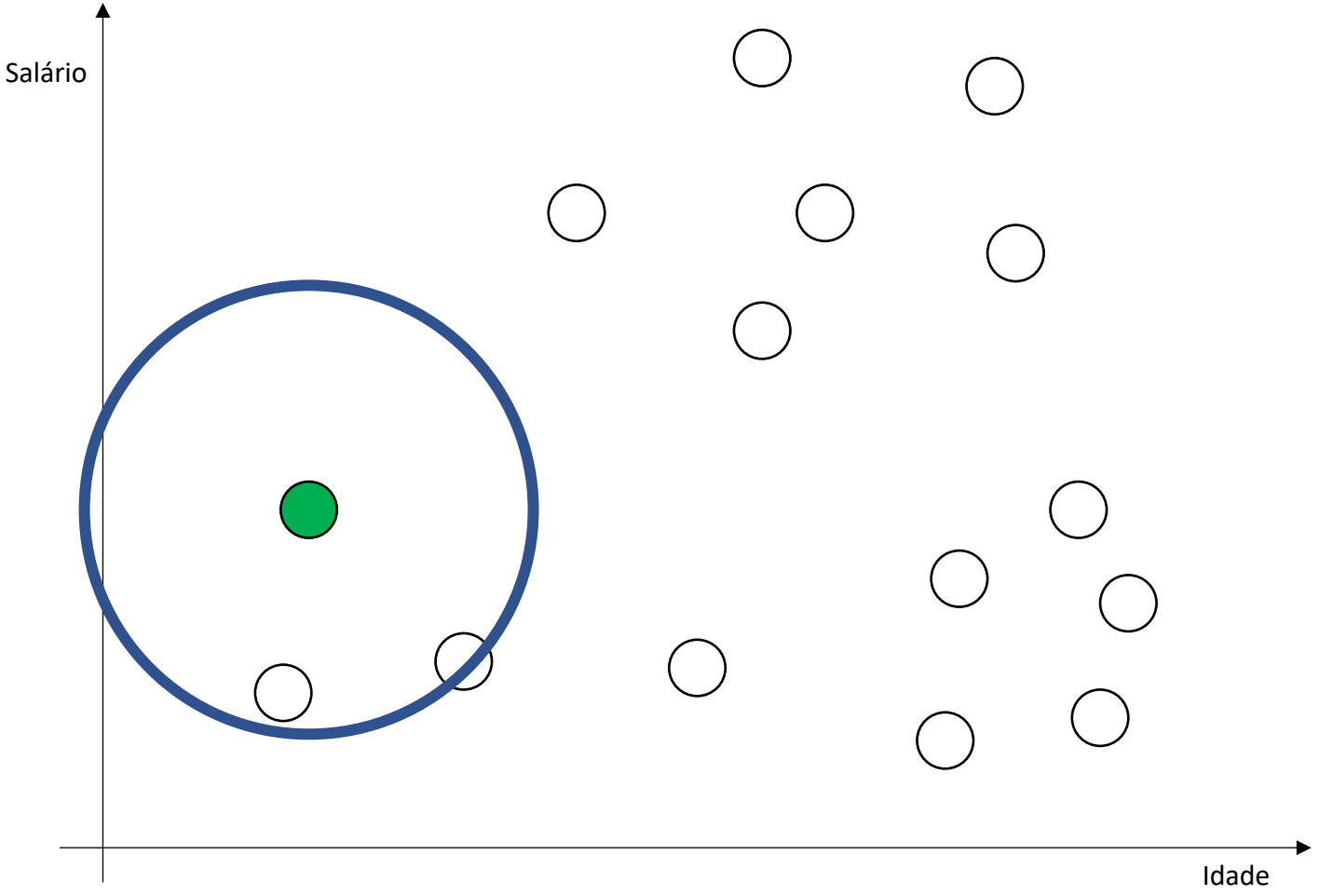

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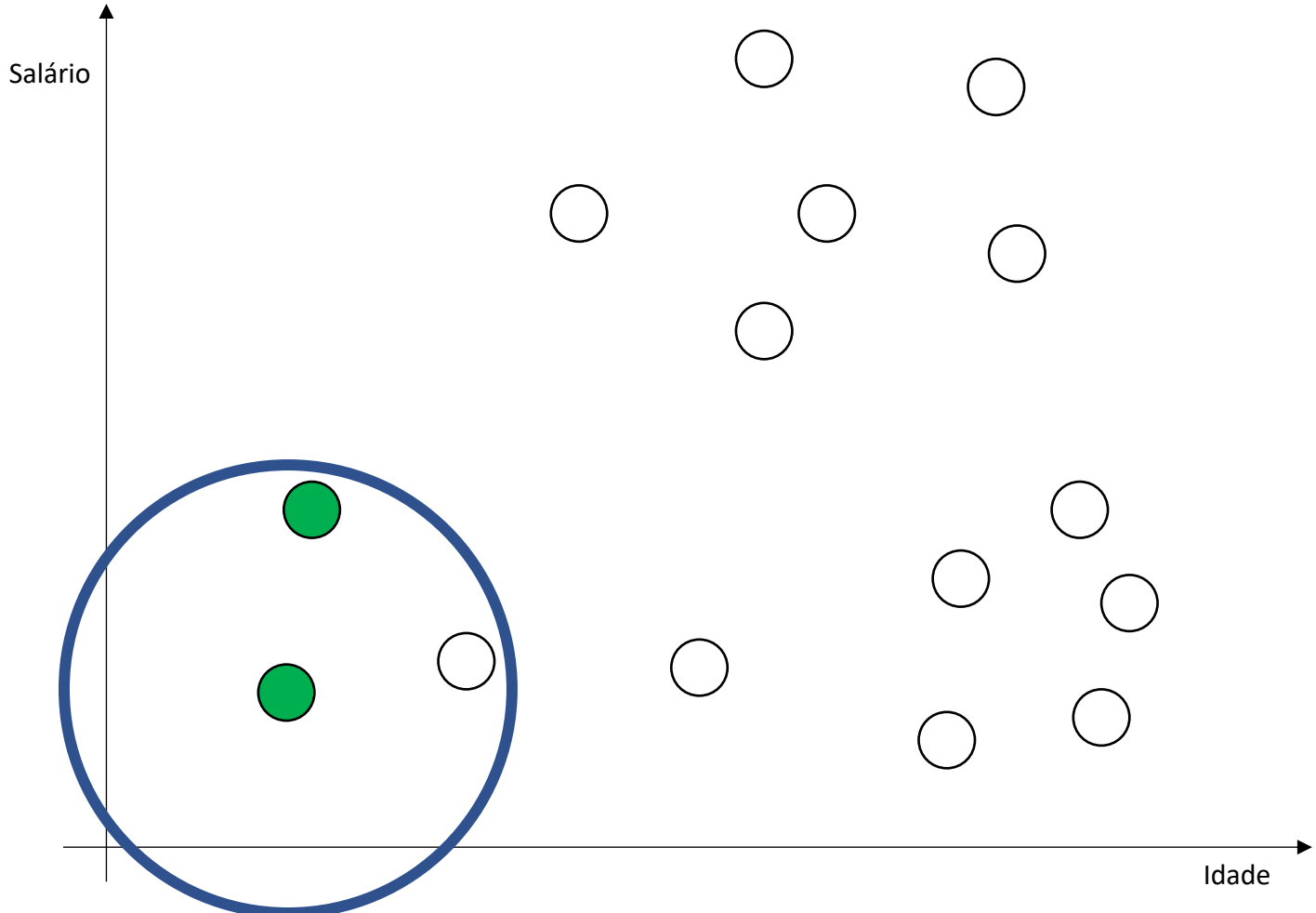

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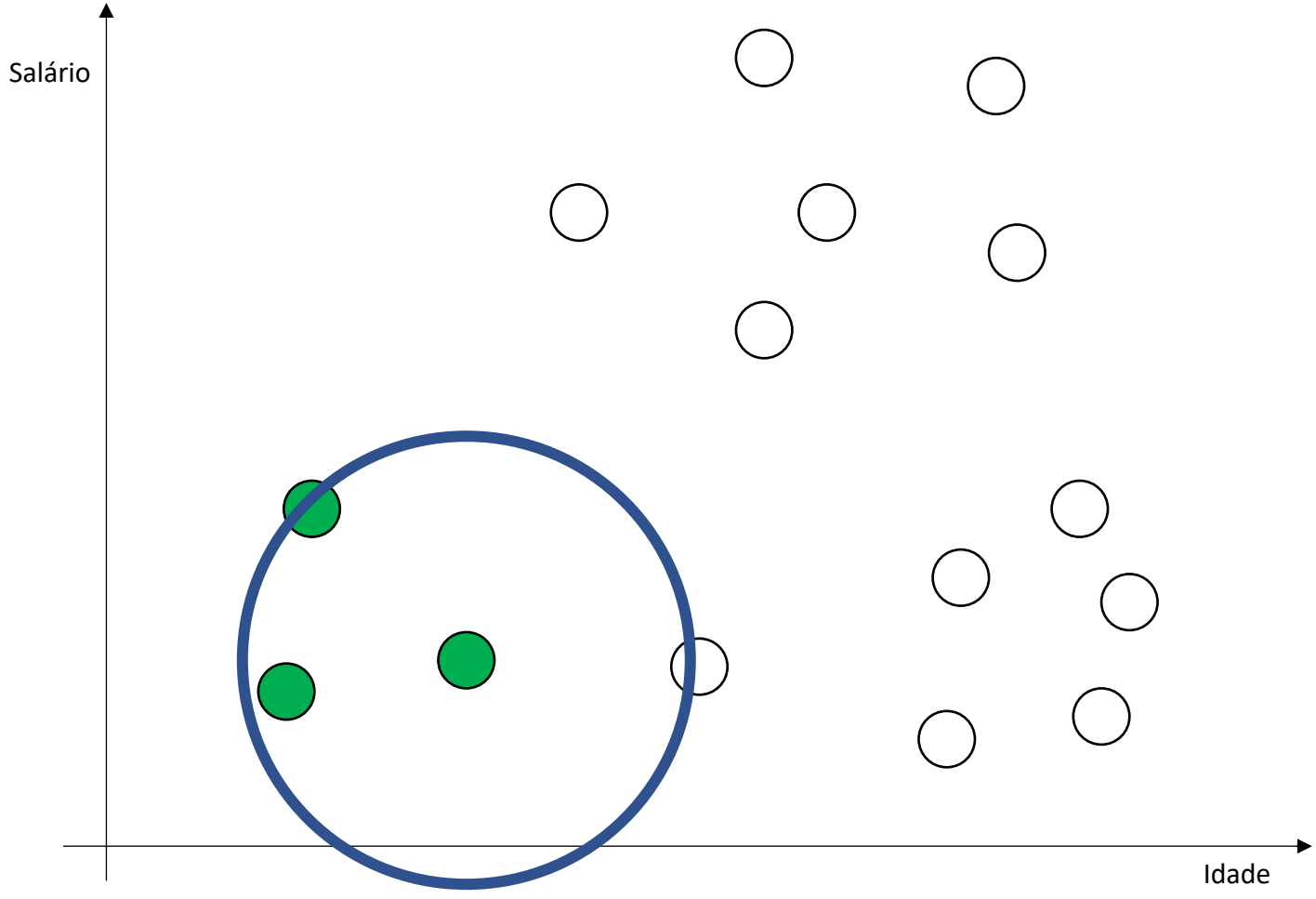

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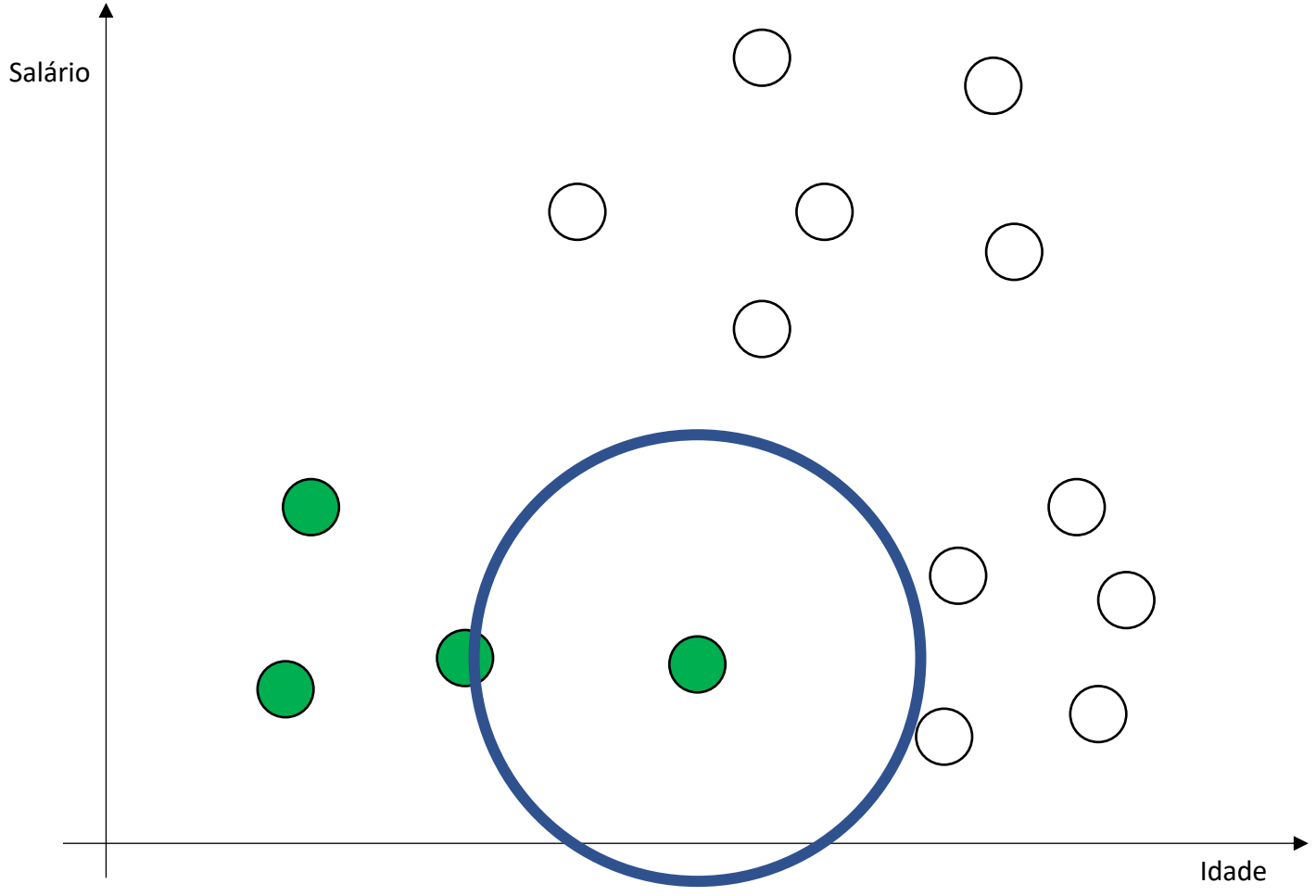

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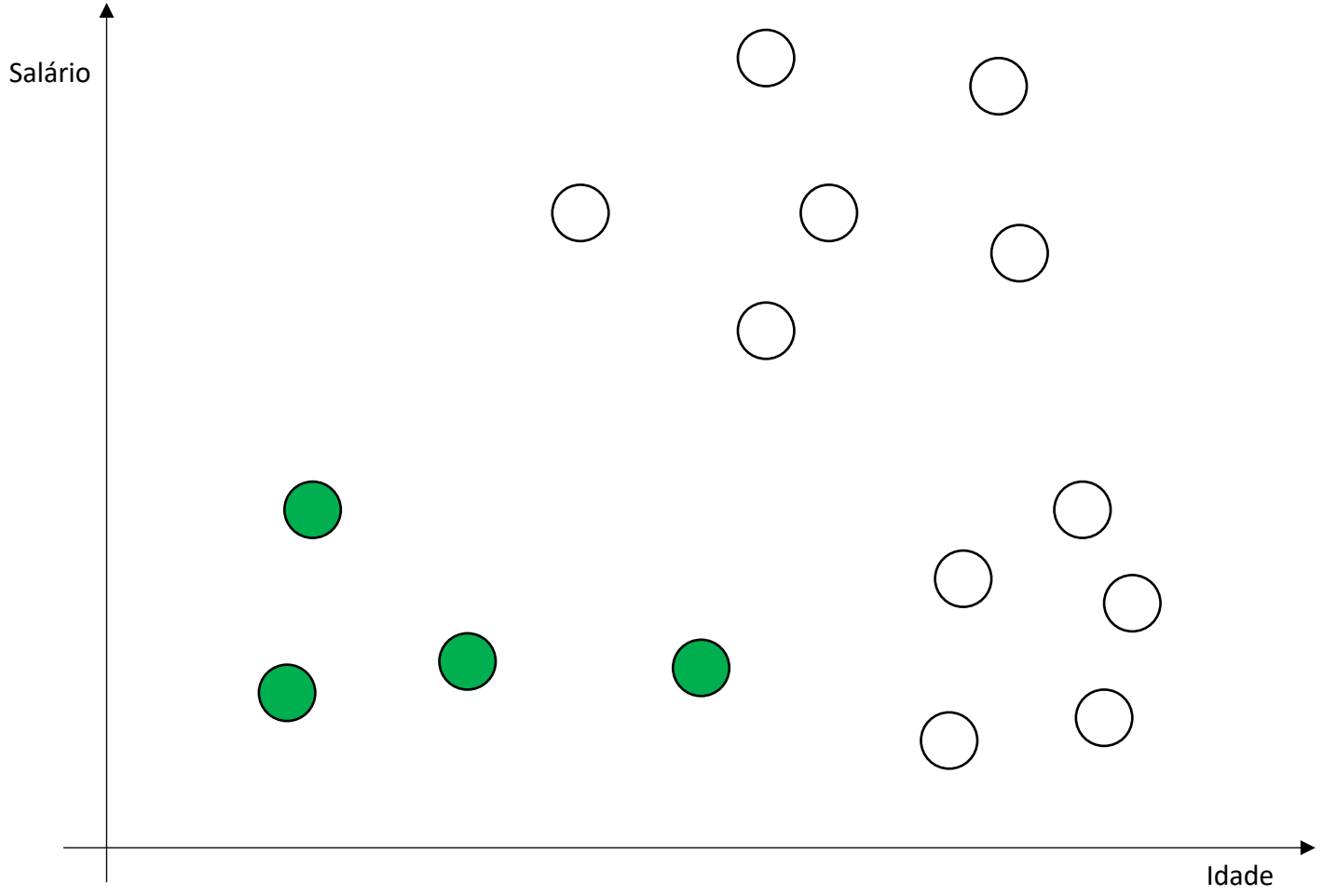

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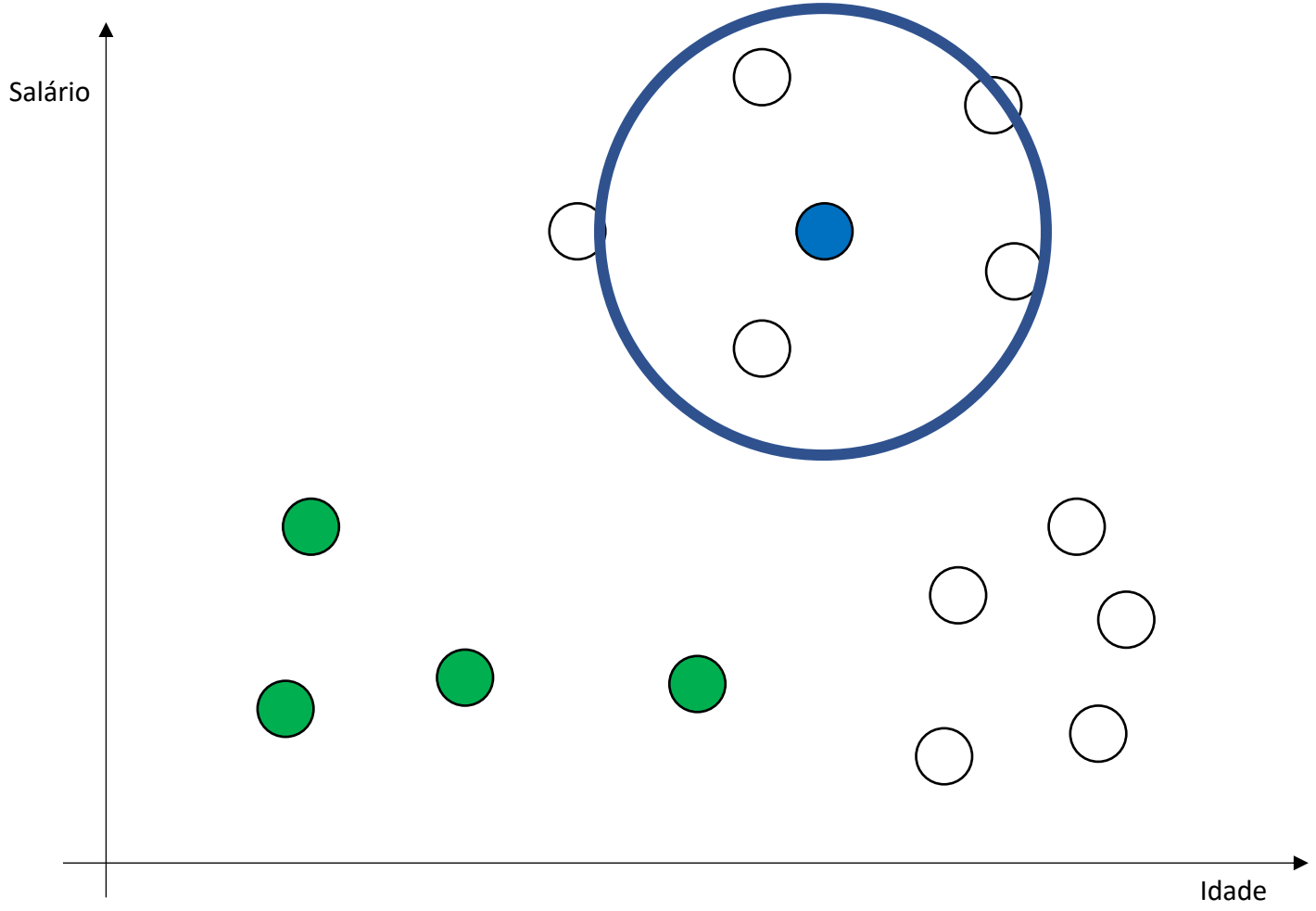

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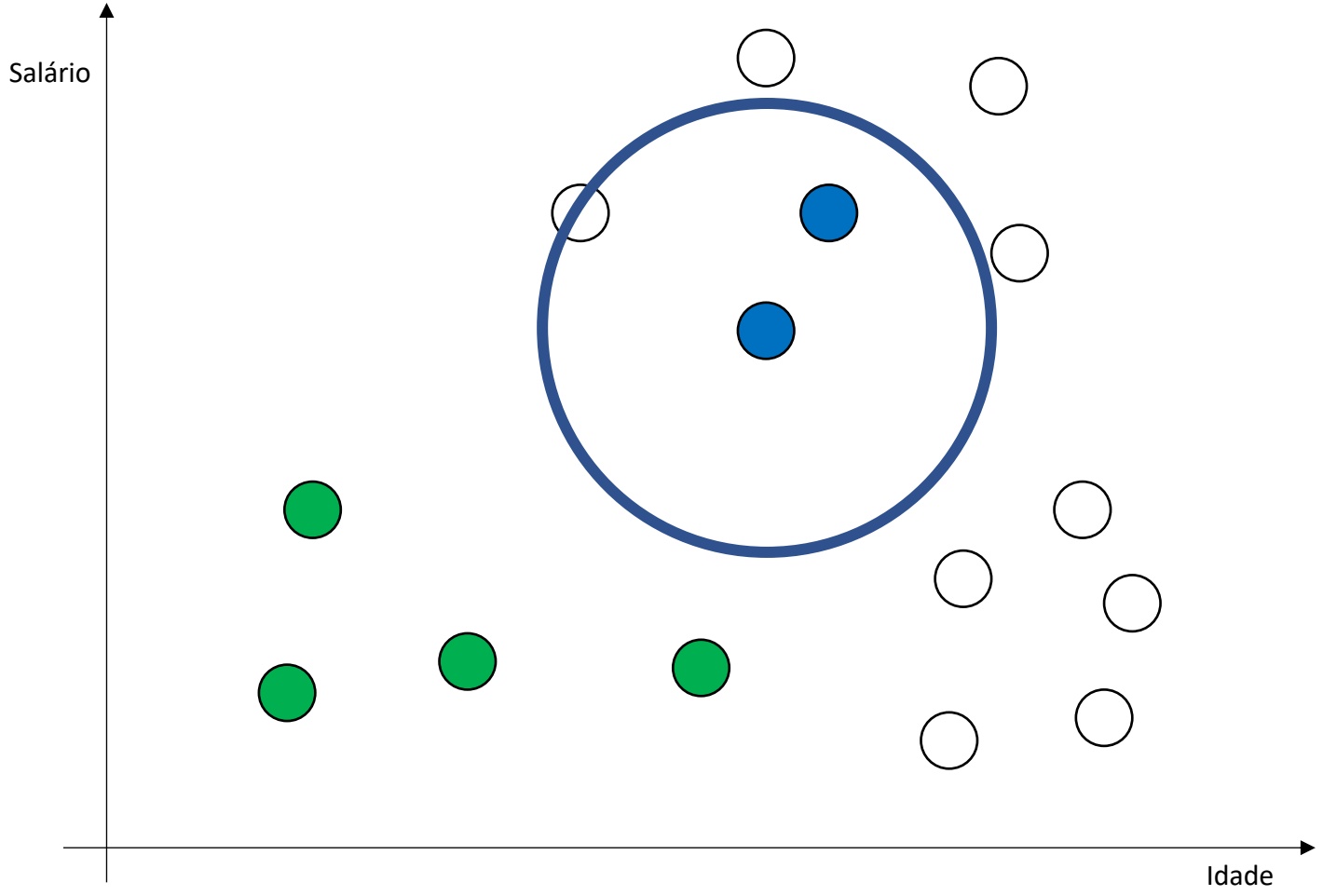

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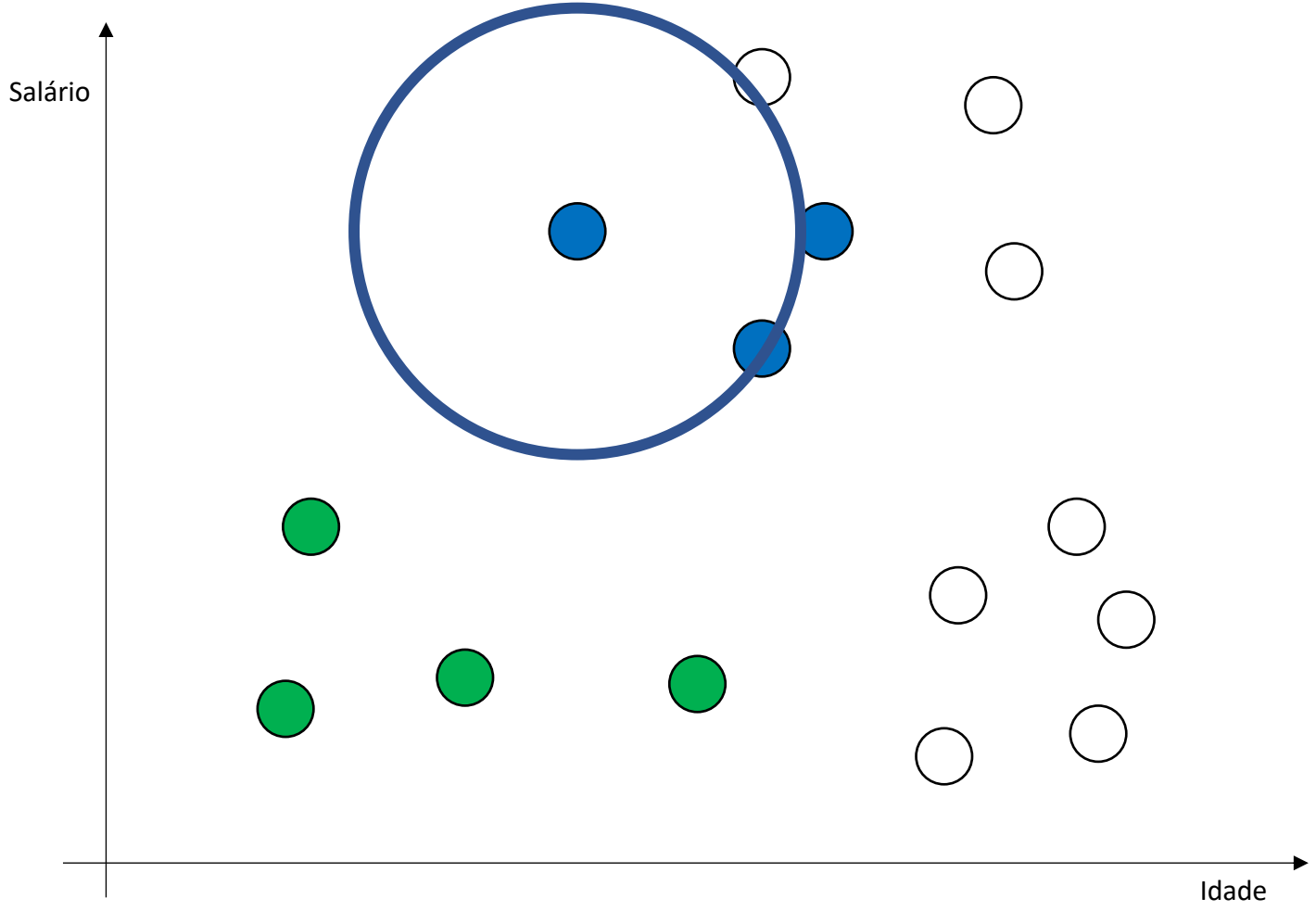

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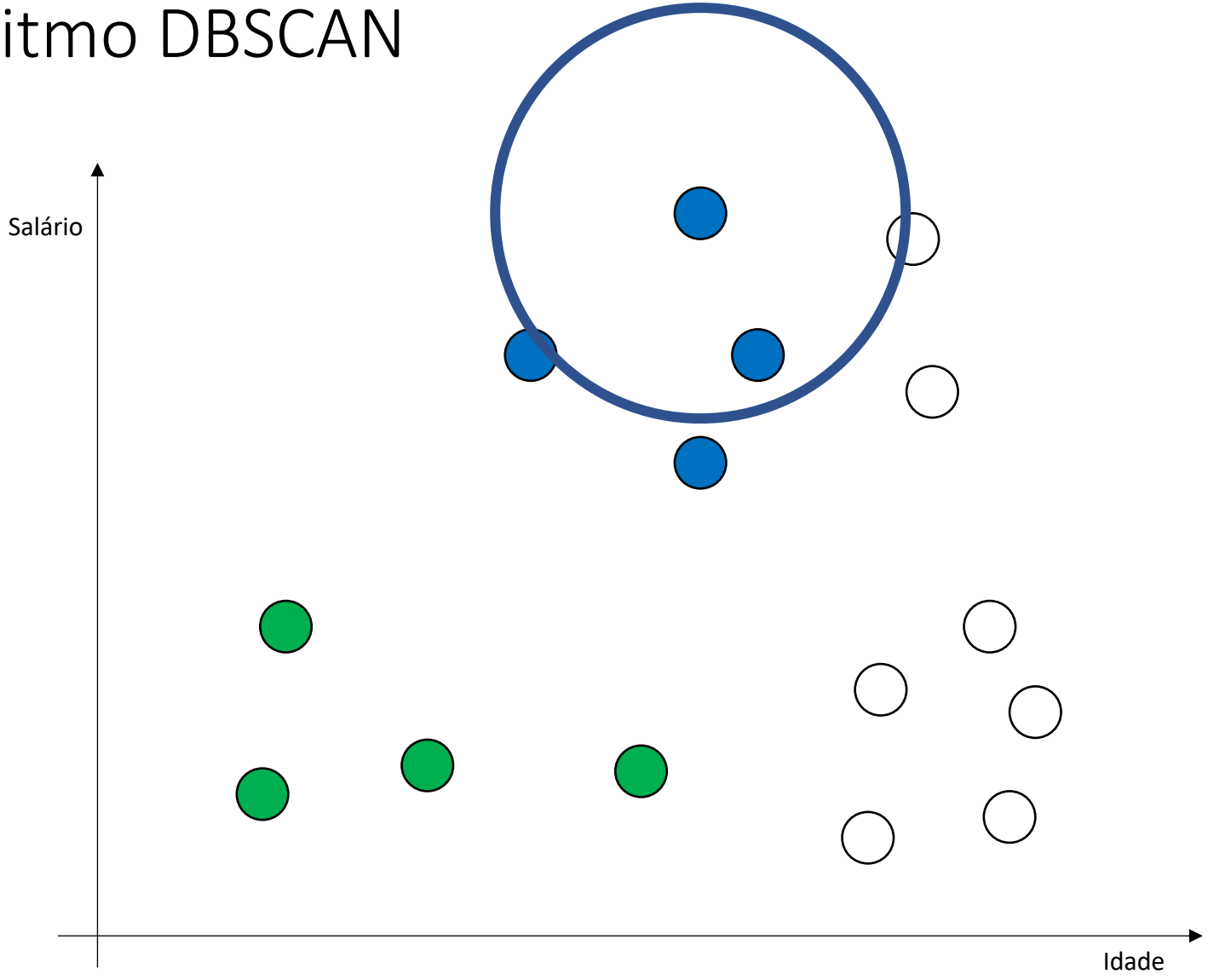

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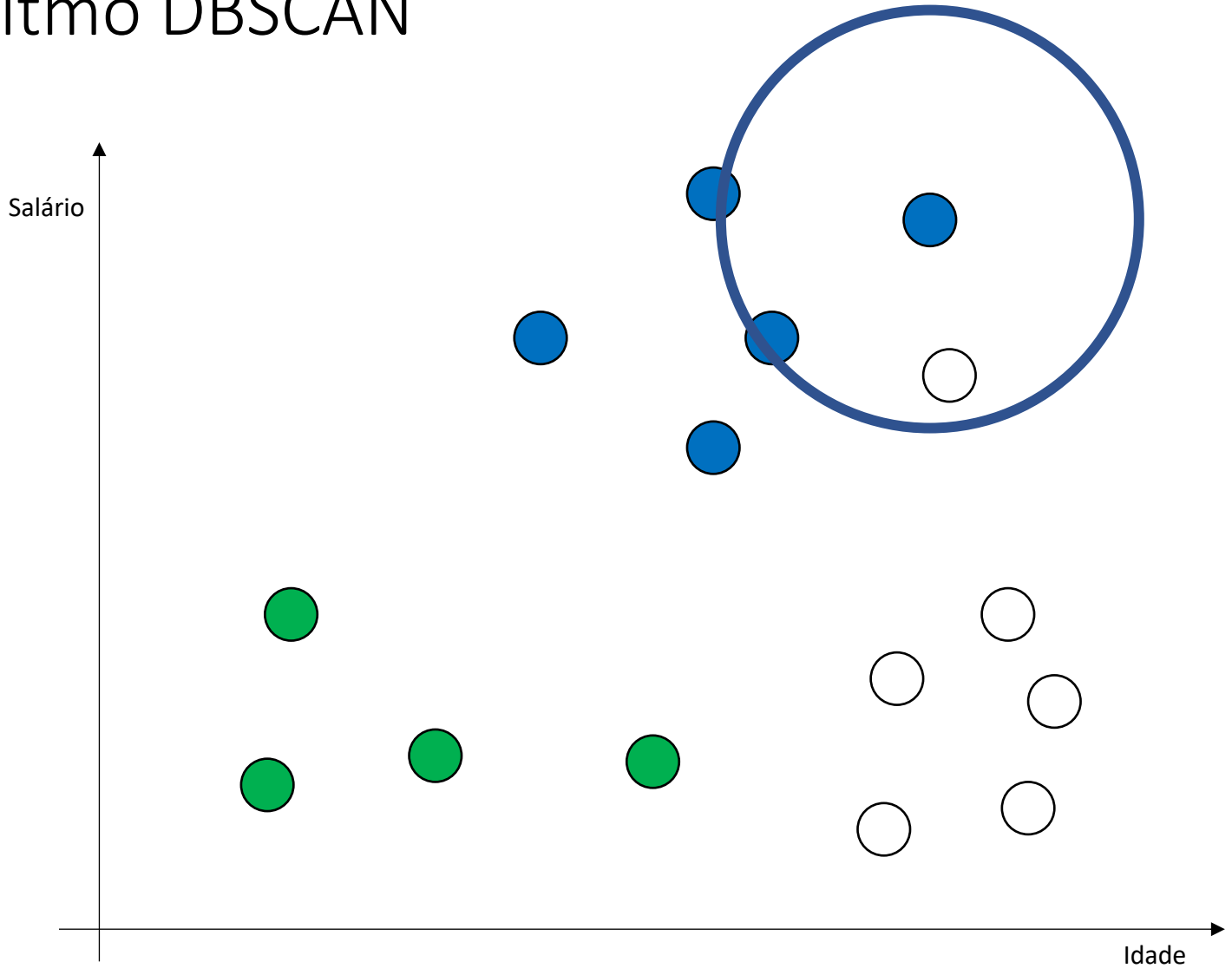

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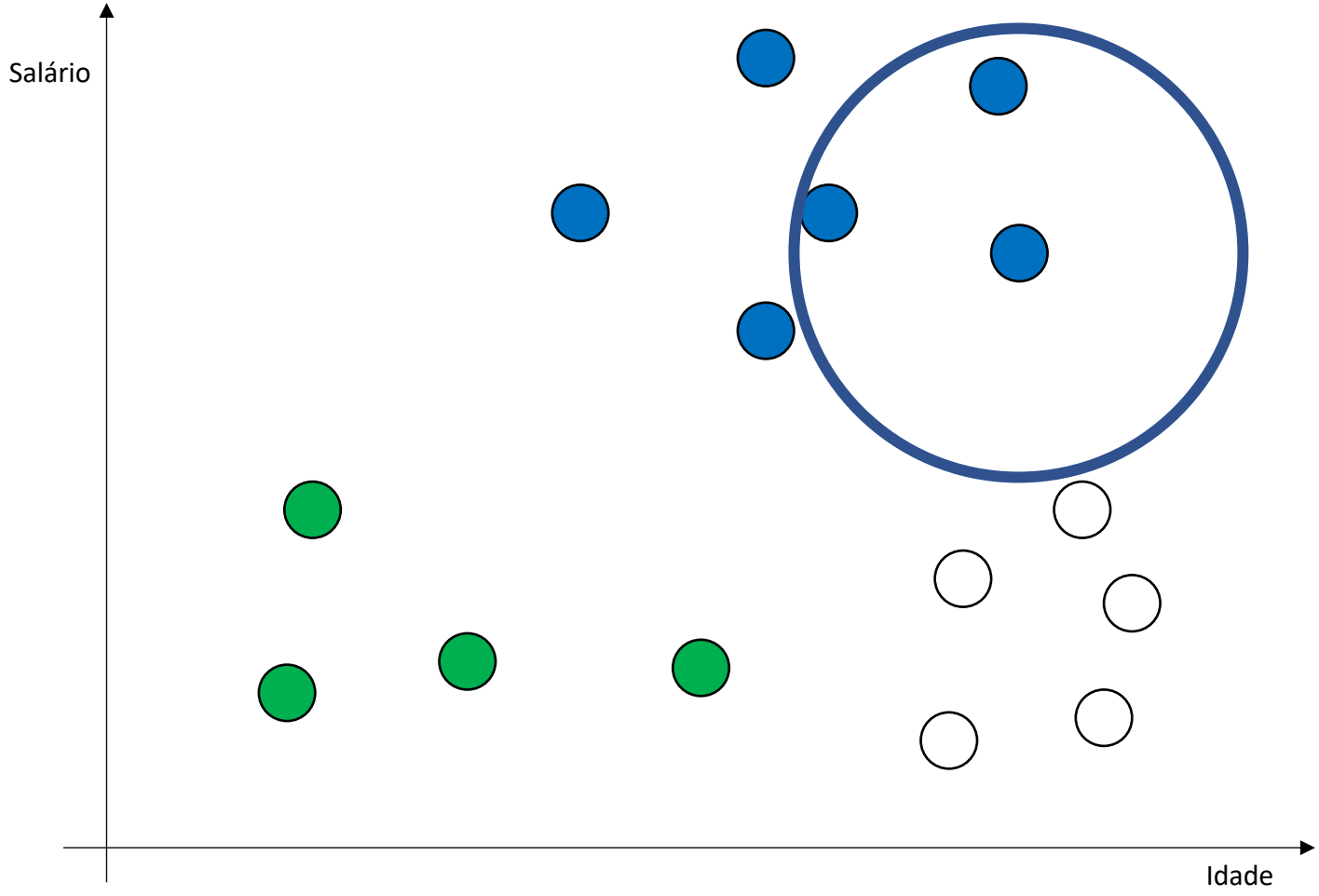

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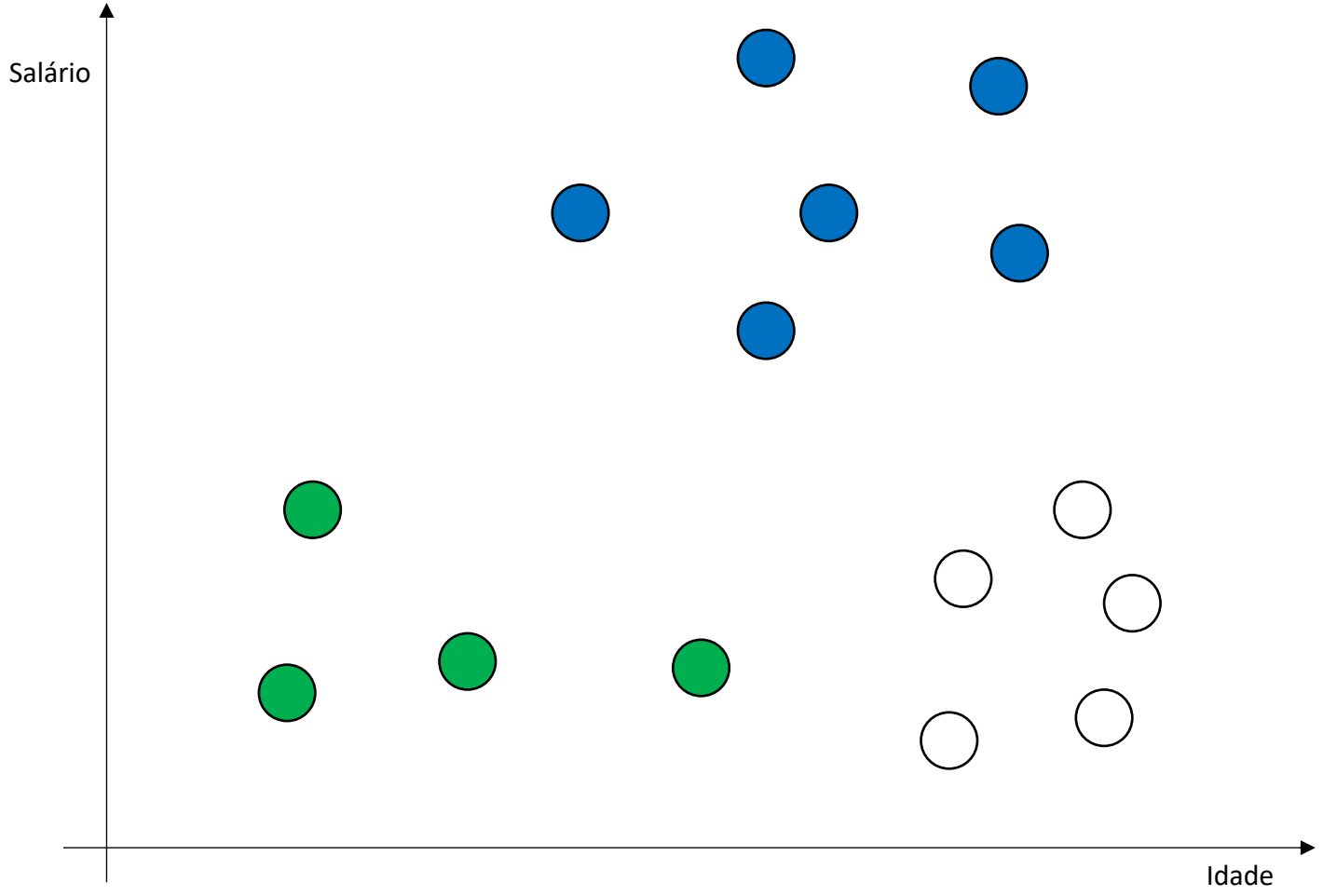

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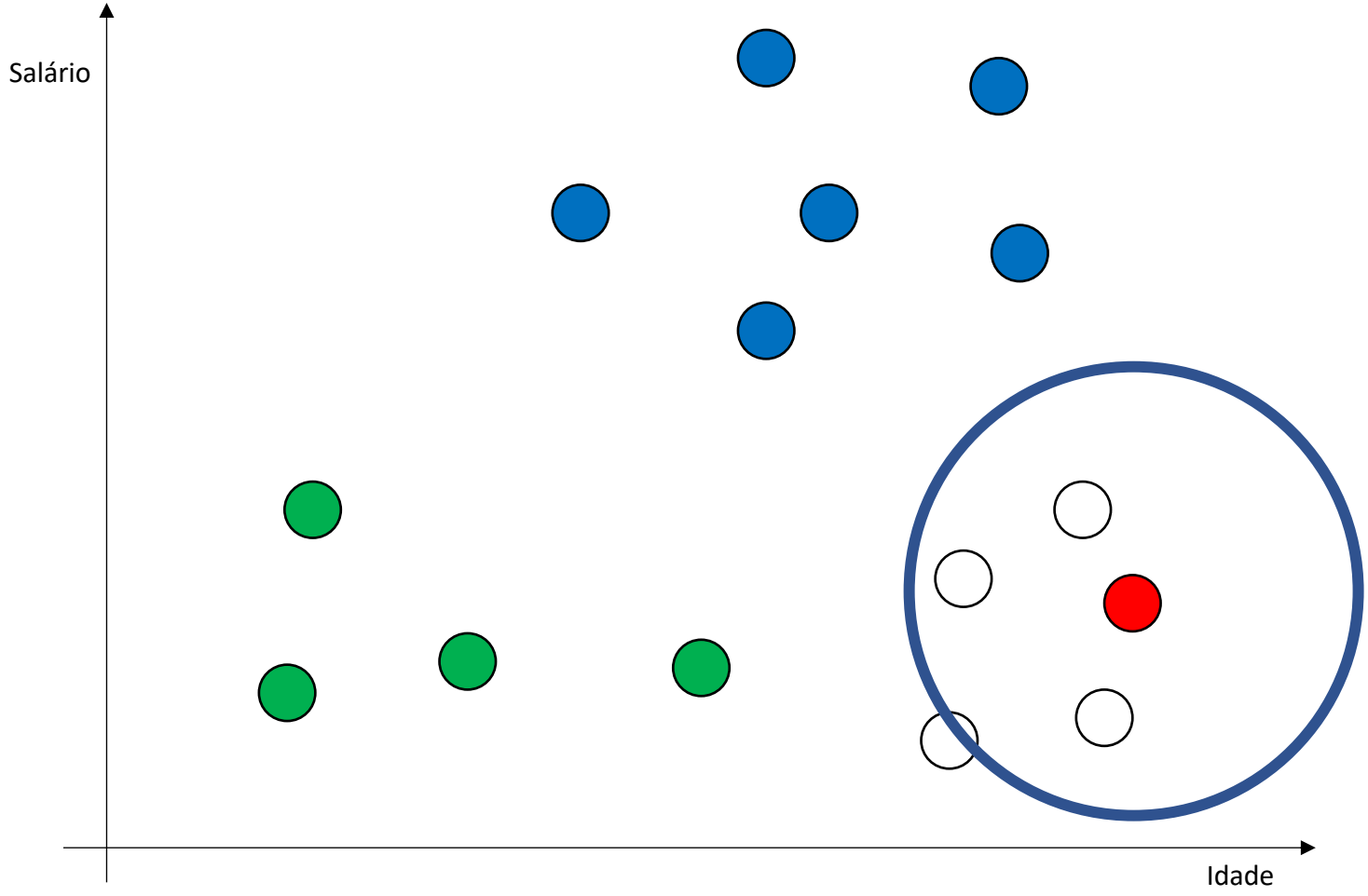

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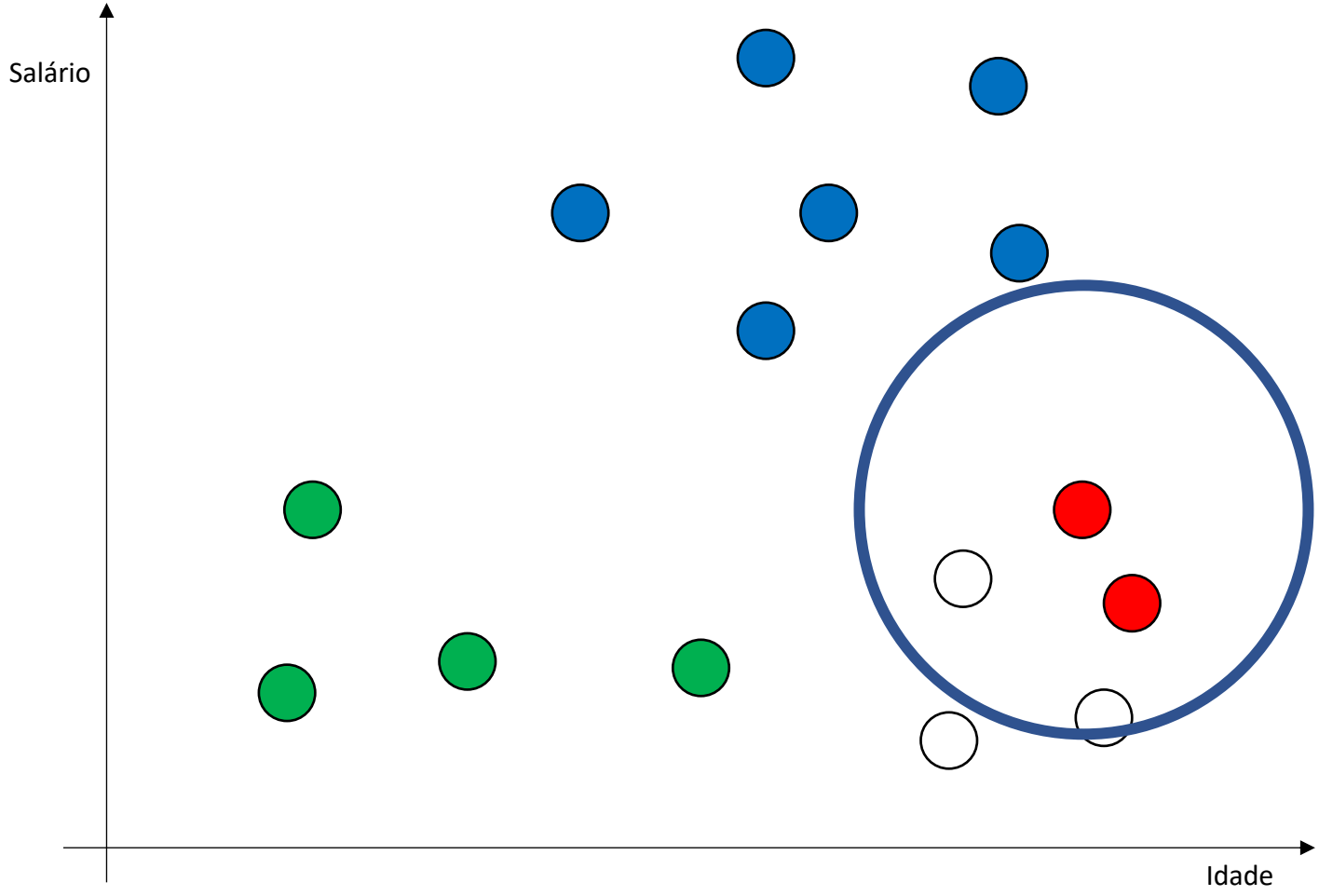

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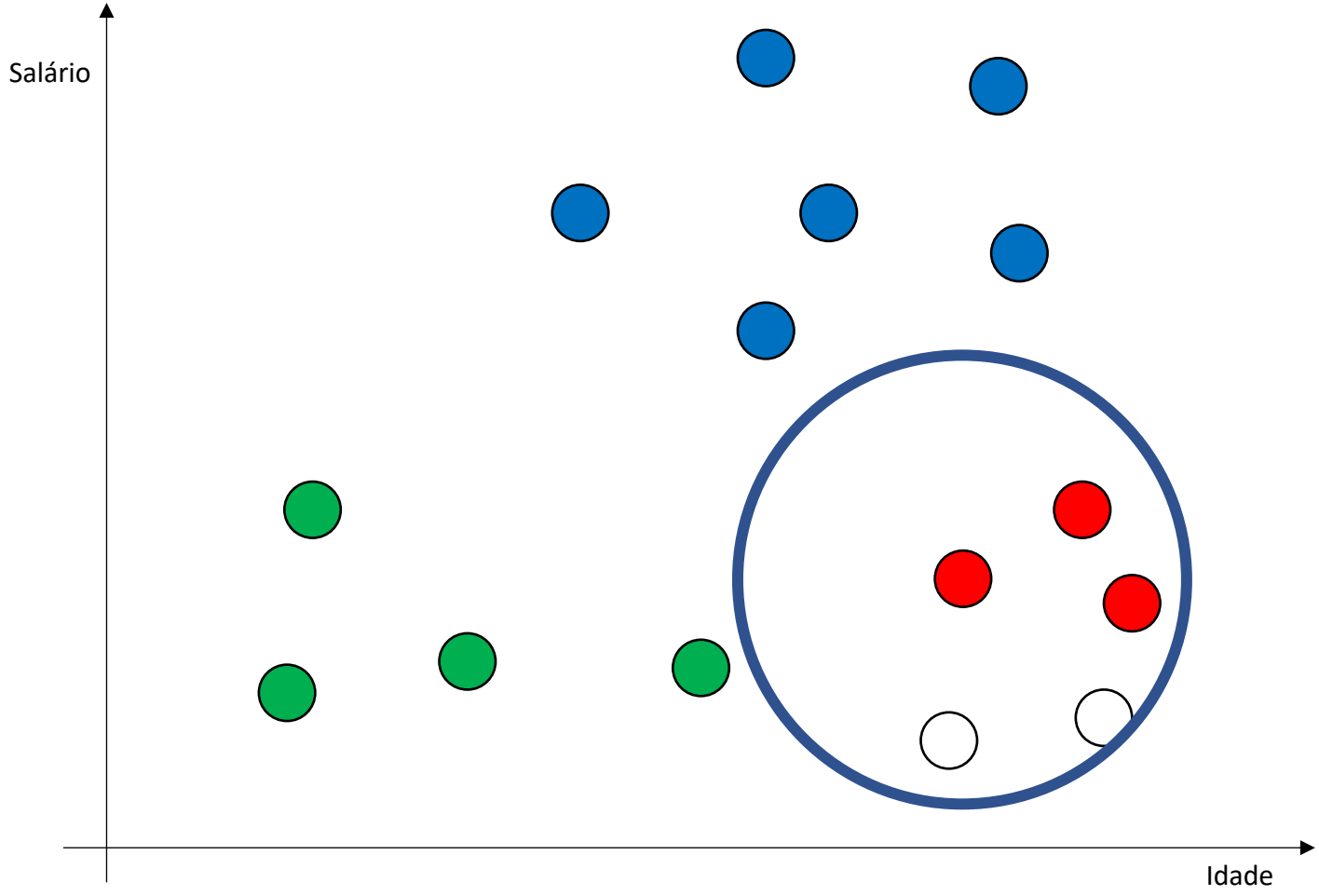

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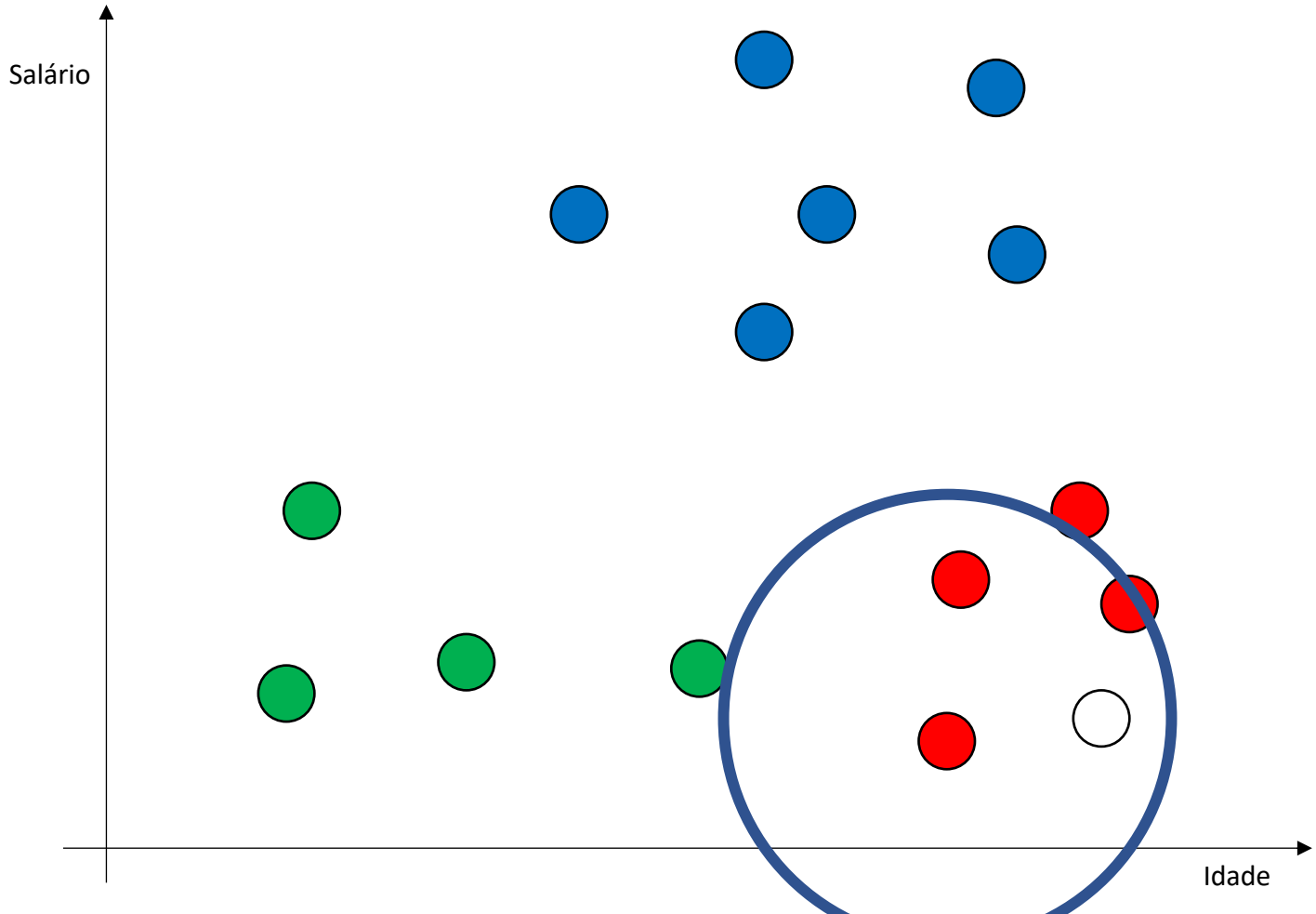

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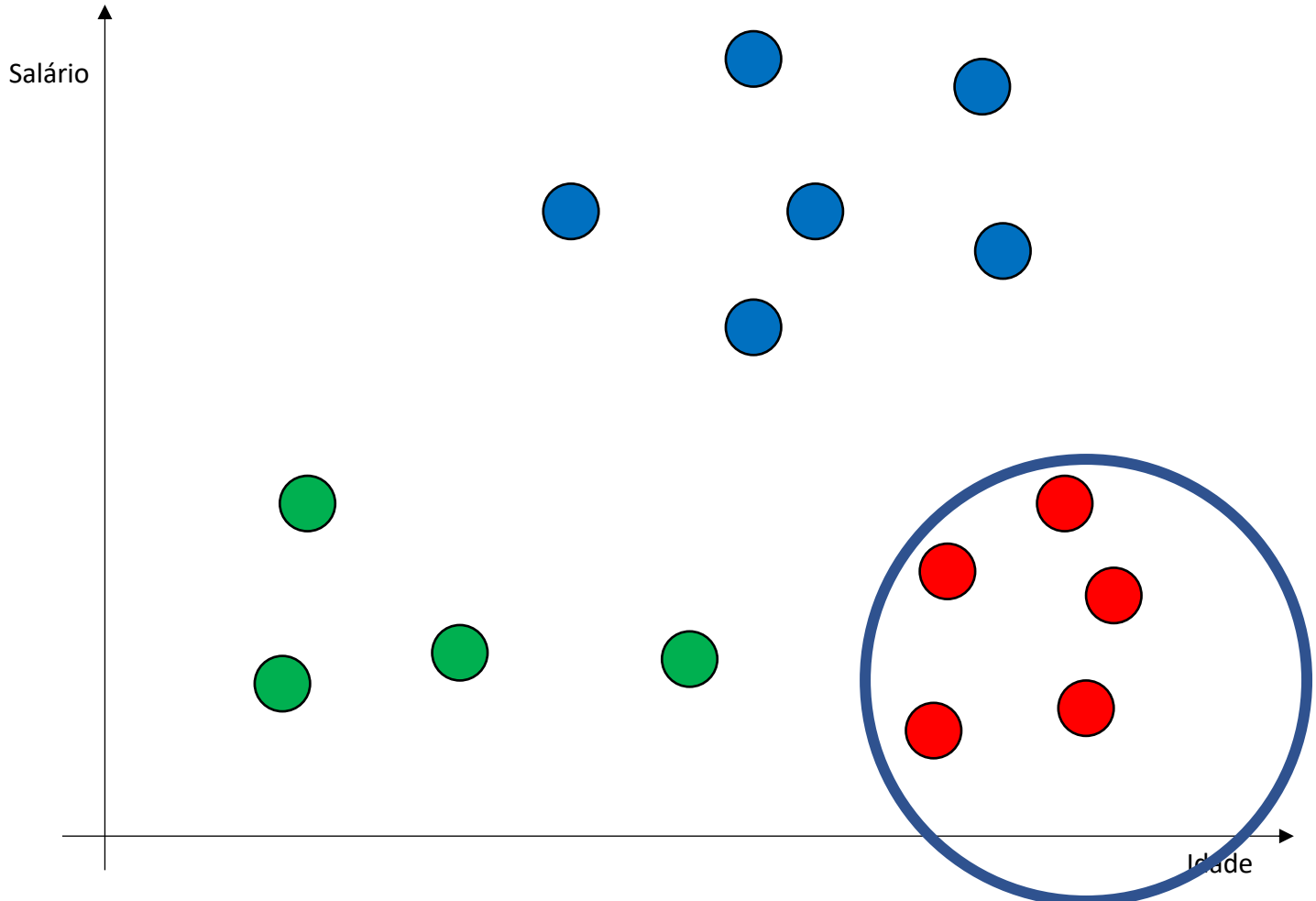

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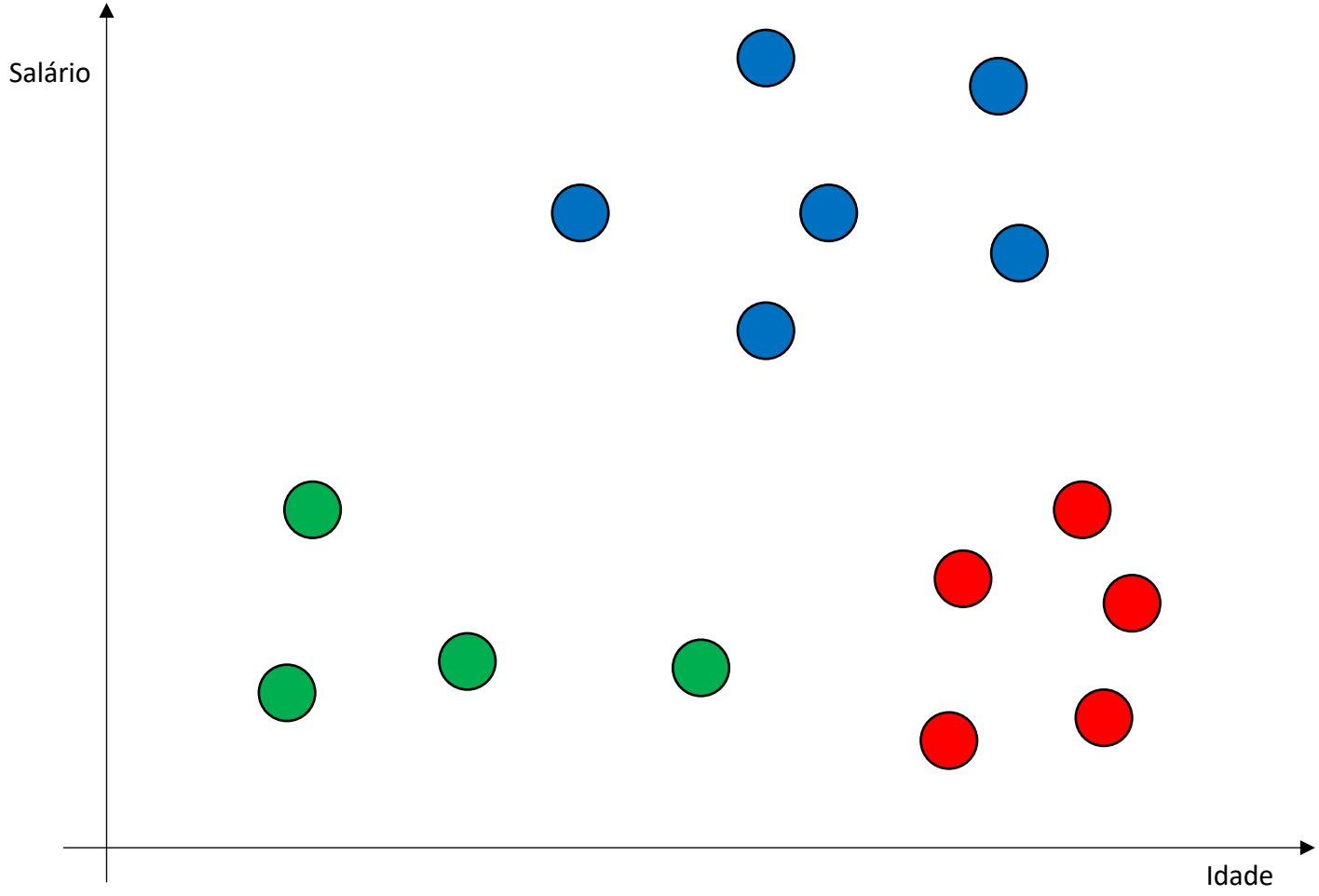

DBSCAN

- Encontra padrões não lineares
- Robusto contra outliers
- O resultado pode ser mais consistente que o k-means porque a inicialização dos “centroides” não afeta tanto o algoritmo
- Dependendo da inicialização, um ponto pode pertencer aos cluster dependendo da ordem
- Pode ser difícil encontrar um bom valor para o parâmetro da distância

Conclusão