

Text Classifiers in Create ML

Tao Jia, Core ML

Text Classification

Text Classification

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adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua.



Label 1

Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex
ea commodo consequat.



Label 2

Excepteur sint occaecat cupidatat non
proident, sunt in culpa qui officia deserunt
mollit anim id est laborum



Label 3

Text Classification

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



Label 1

Sentiment Analysis



Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.



Label 2

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum



Label 3

Text Classification

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



Label 1

Sentiment Analysis



Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.



Label 2

Spam/Not Spam



Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum



Label 3

Text Classification

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Label 1

Sentiment Analysis



Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.



Label 2

Spam/Not Spam



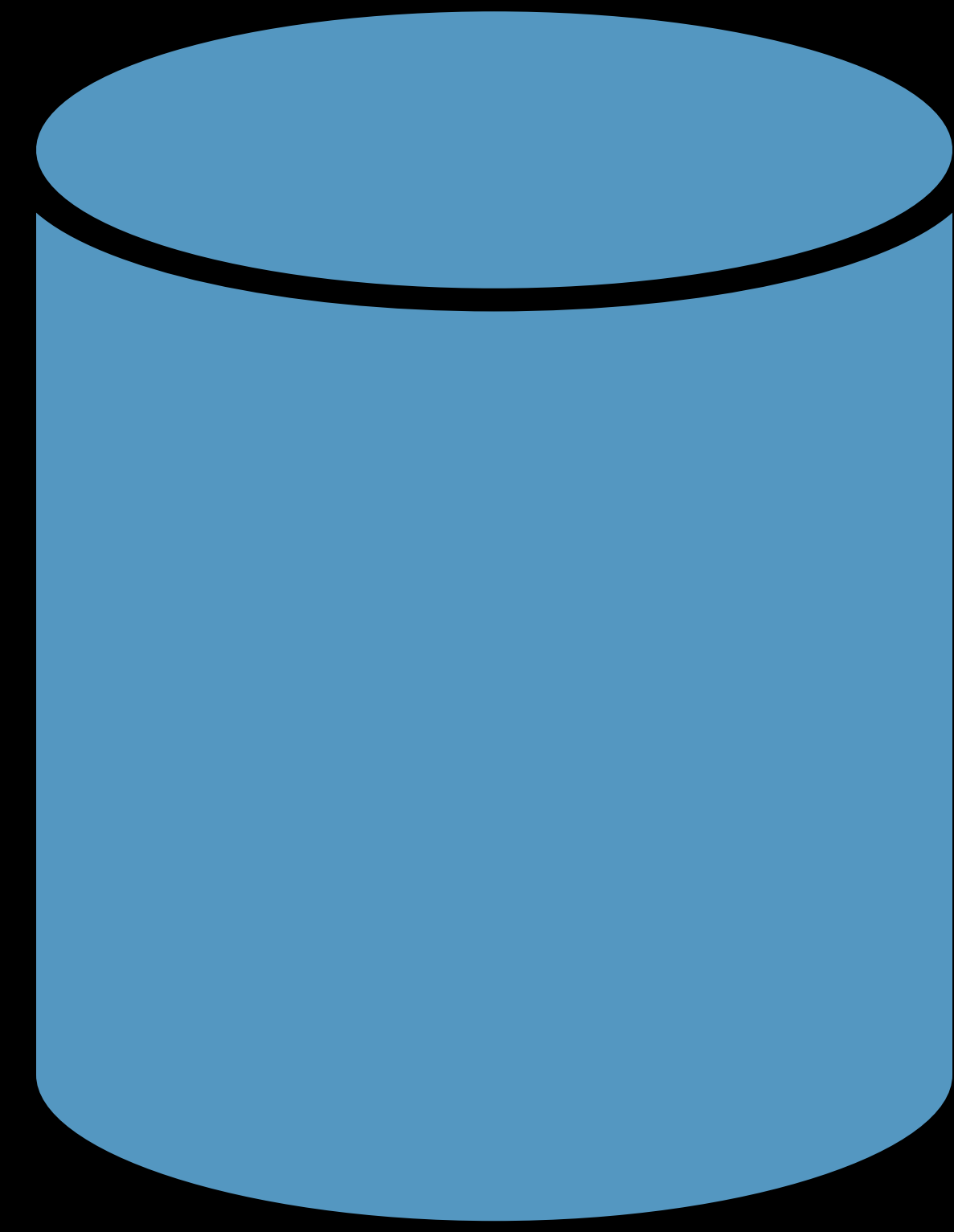
Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum



Label 3

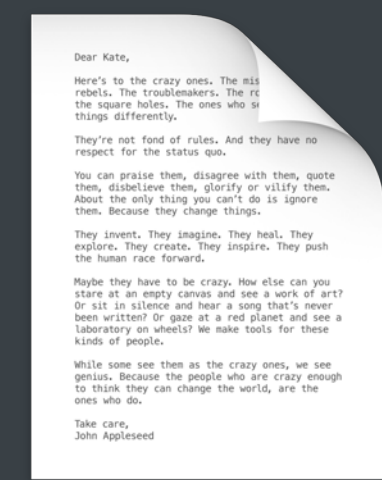
Topic Classification



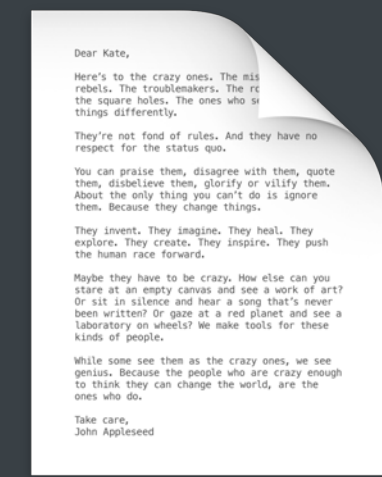


Data

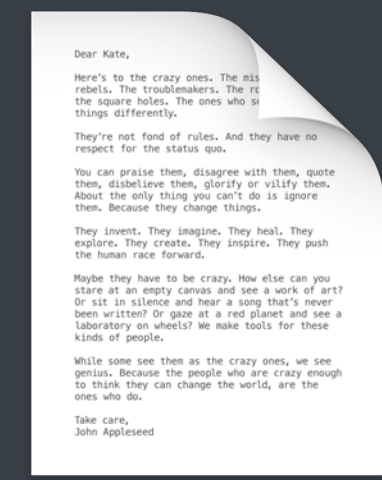
▼  Sports



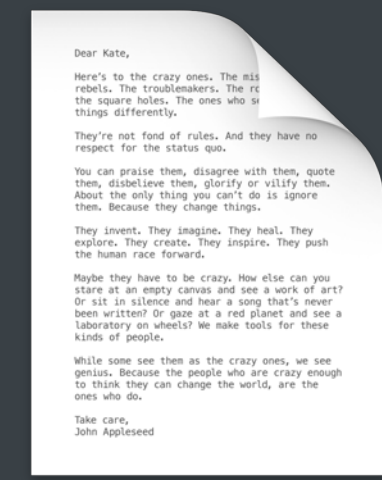
article_01.txt



article_04.txt



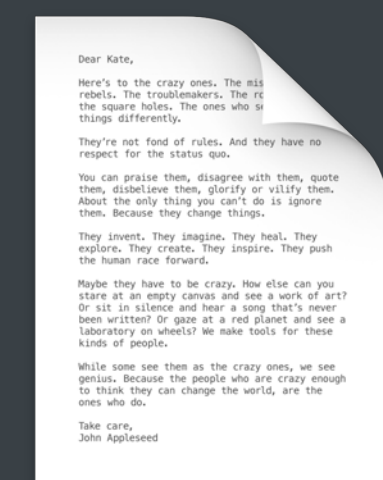
article_05.txt



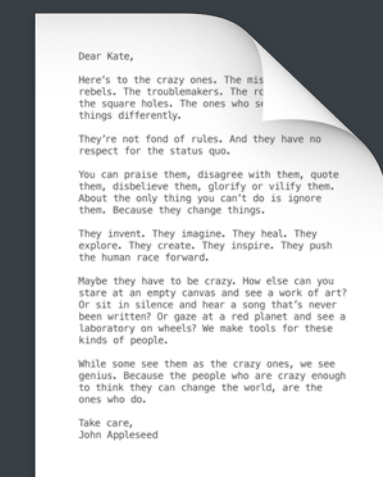
article_08.txt



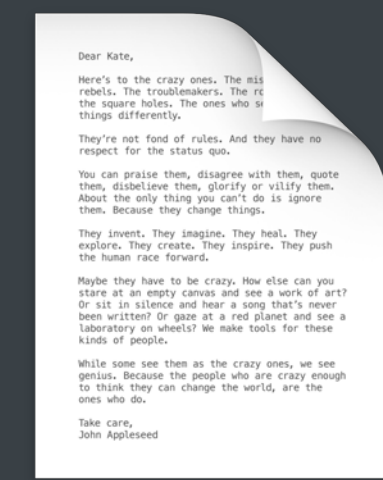
▼  Entertainment



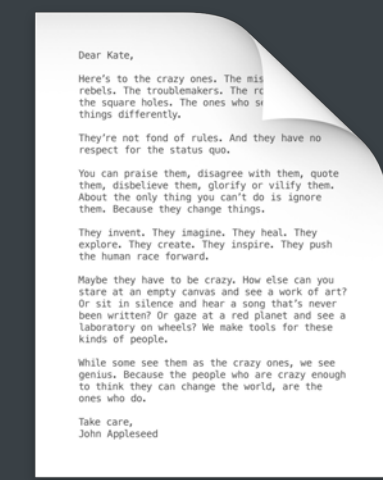
article_02.txt



article_03.txt




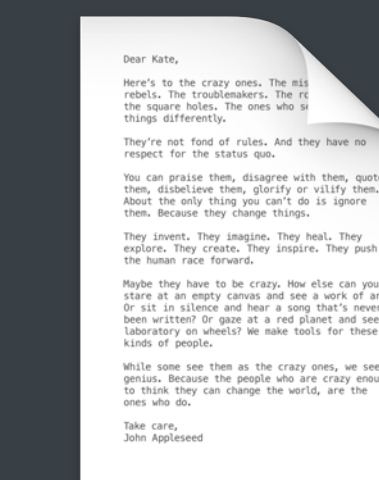
article_06.txt



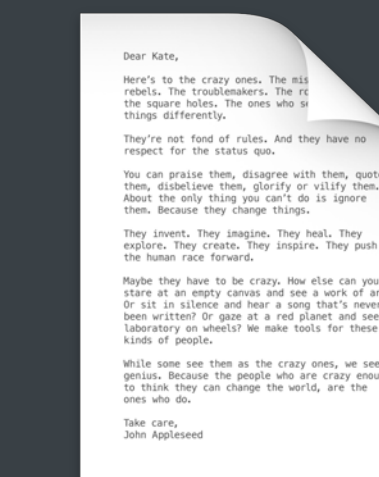
article_07.txt



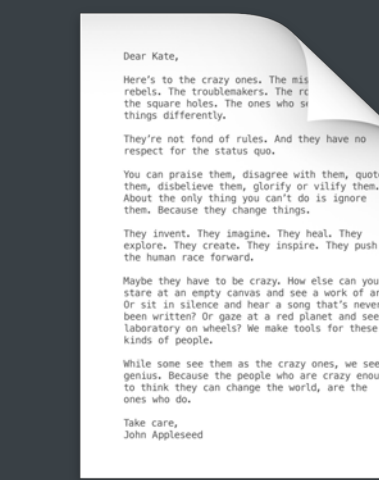
▼  Nature



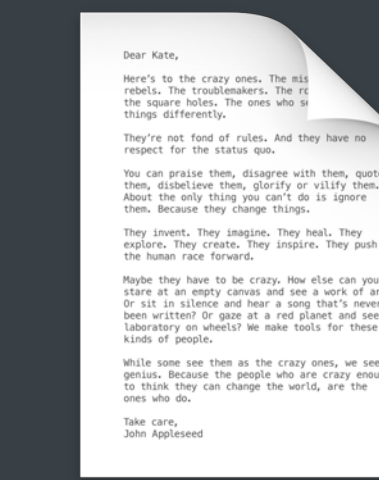
article_15.txt



article_10.txt



article_21.txt



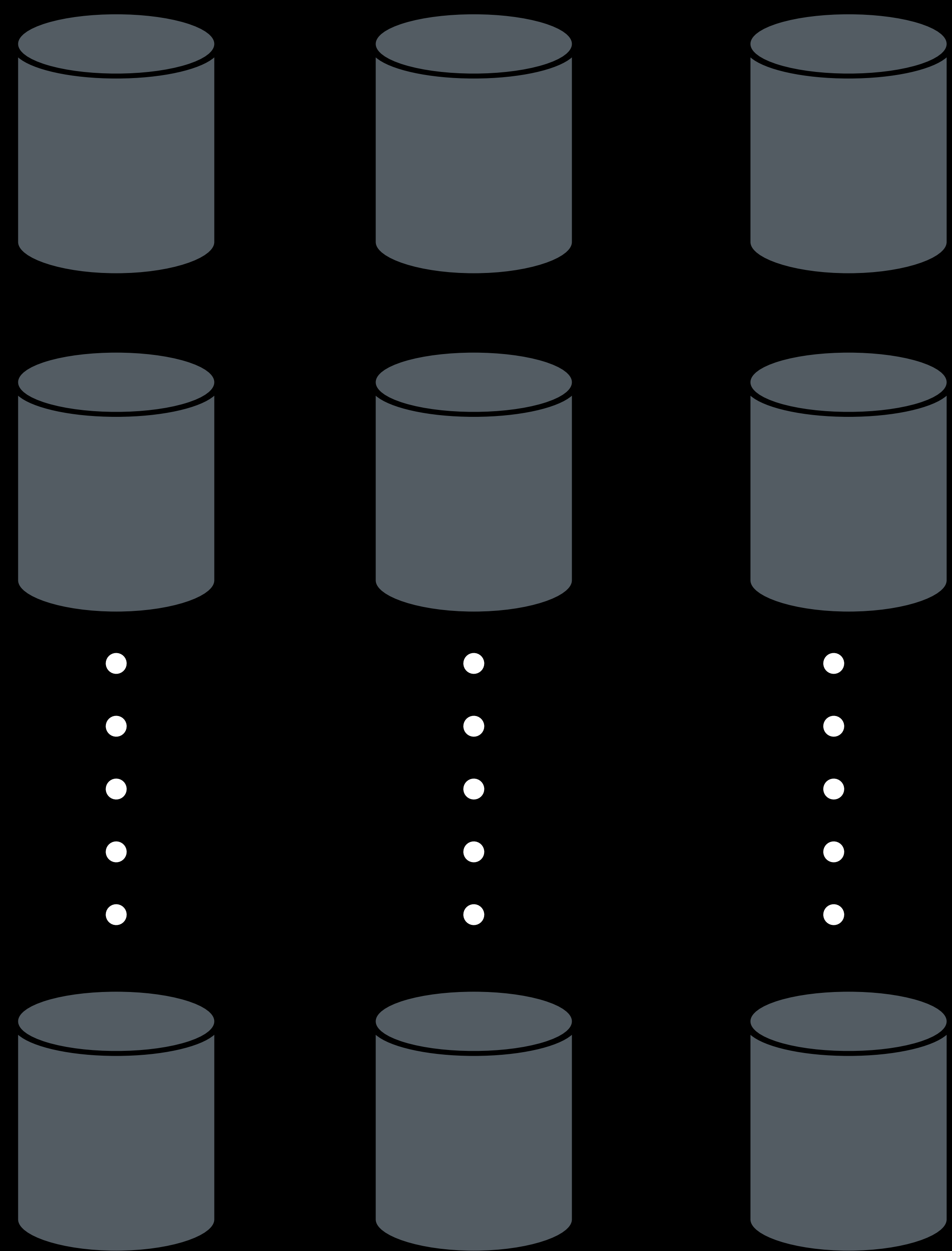
article_22.txt



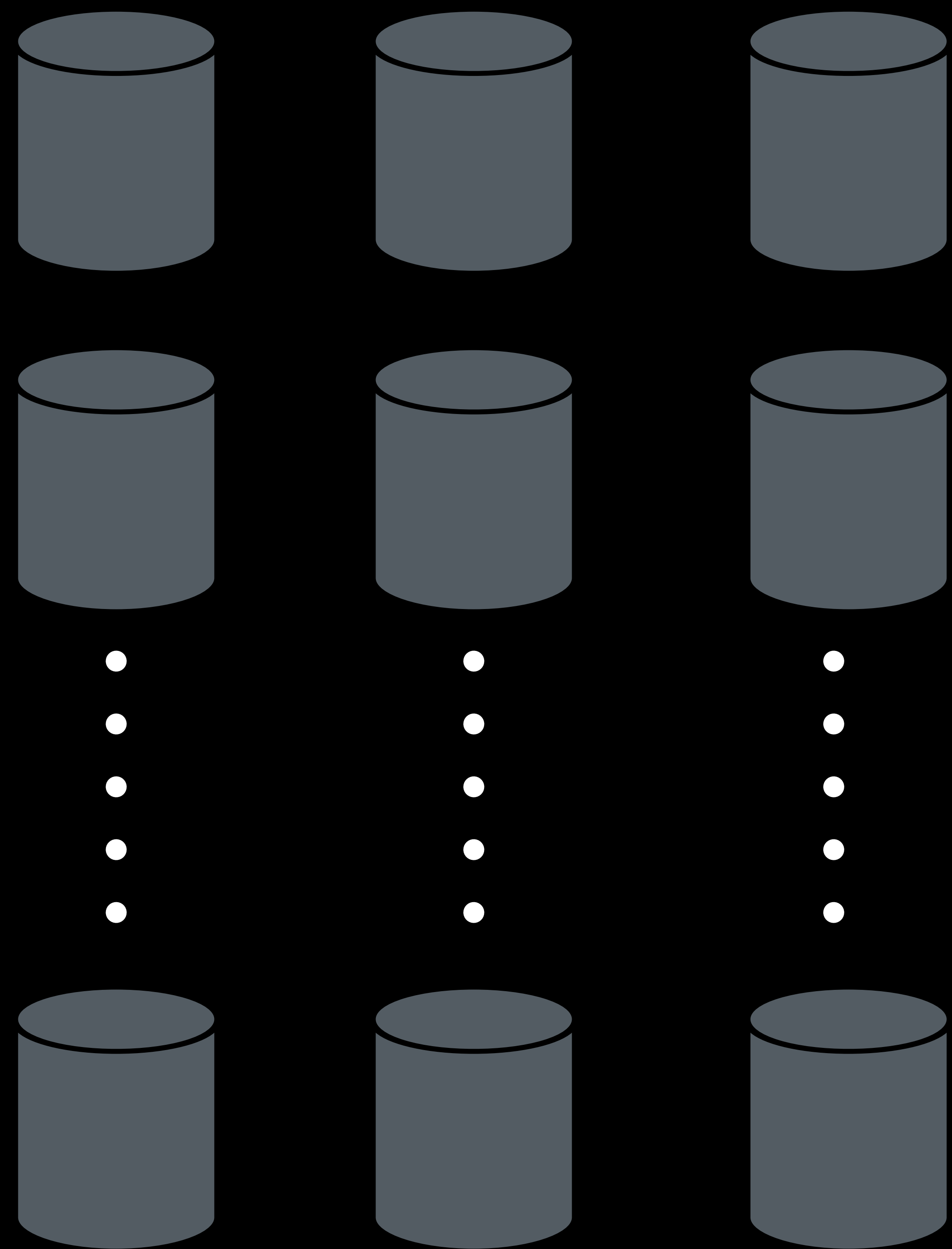
Demo

Text Classifier using Transfer Learning

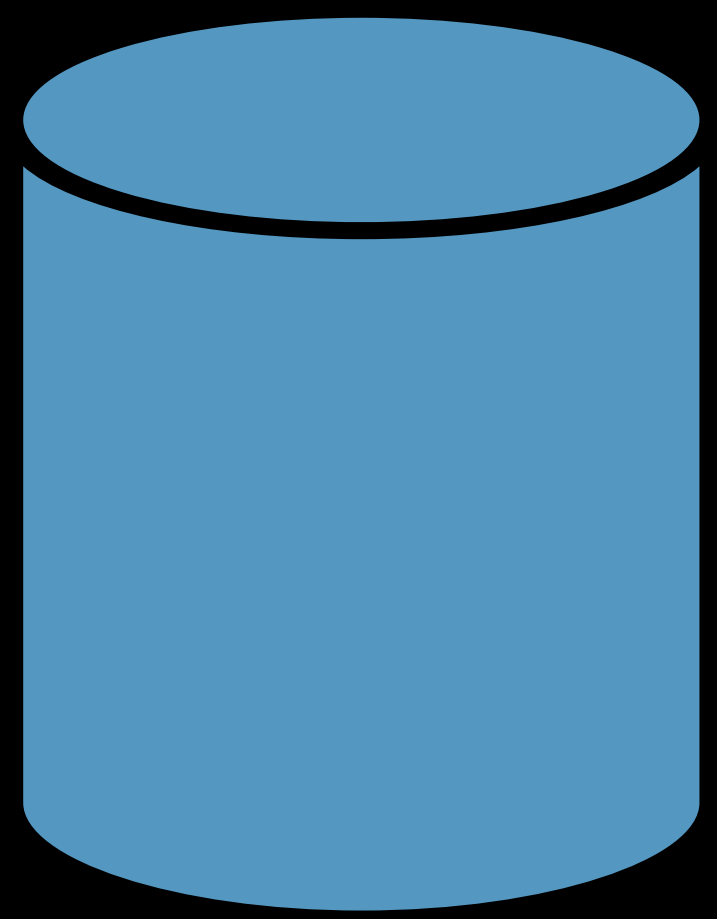
What is Transfer Learning?



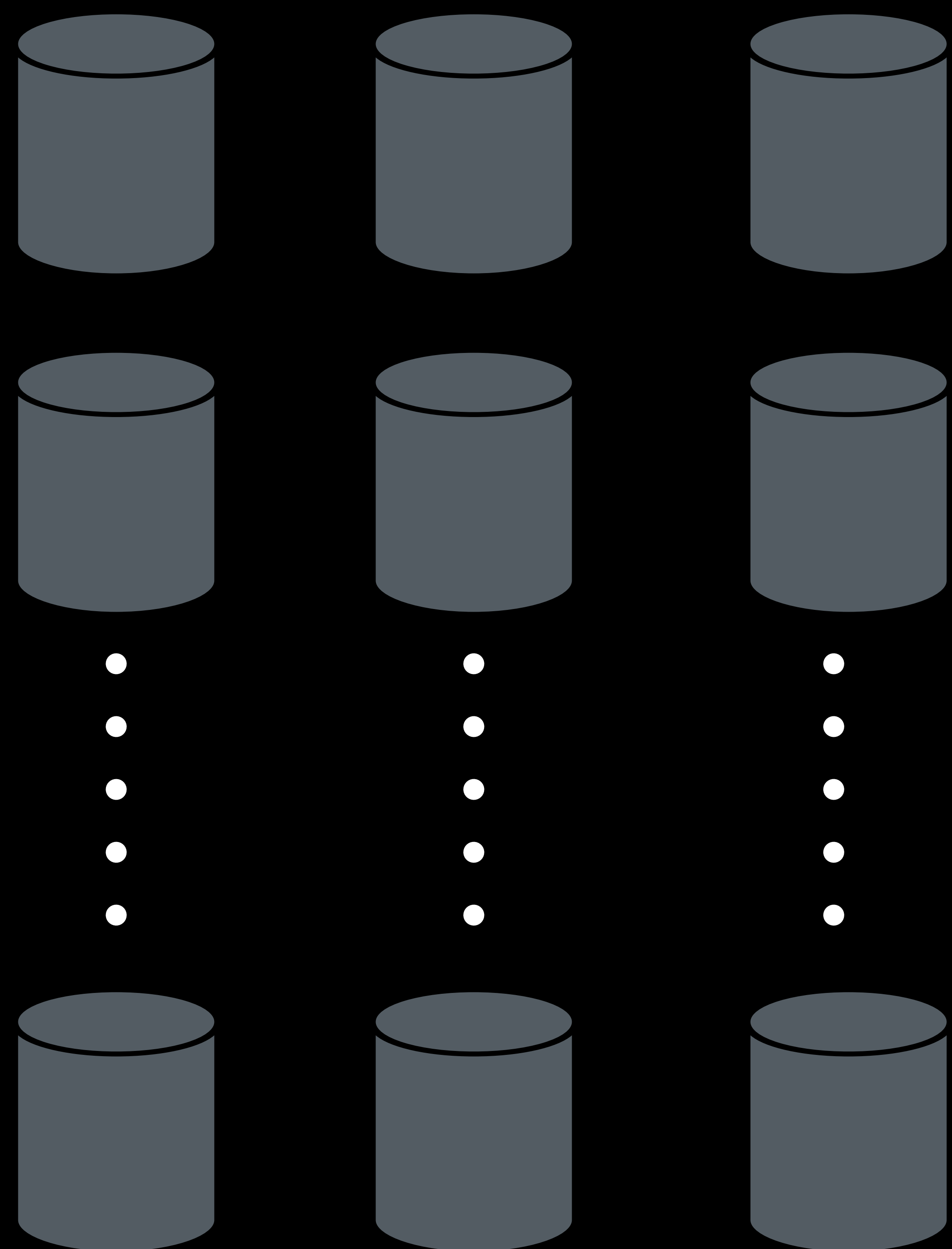
Pre-trained Model



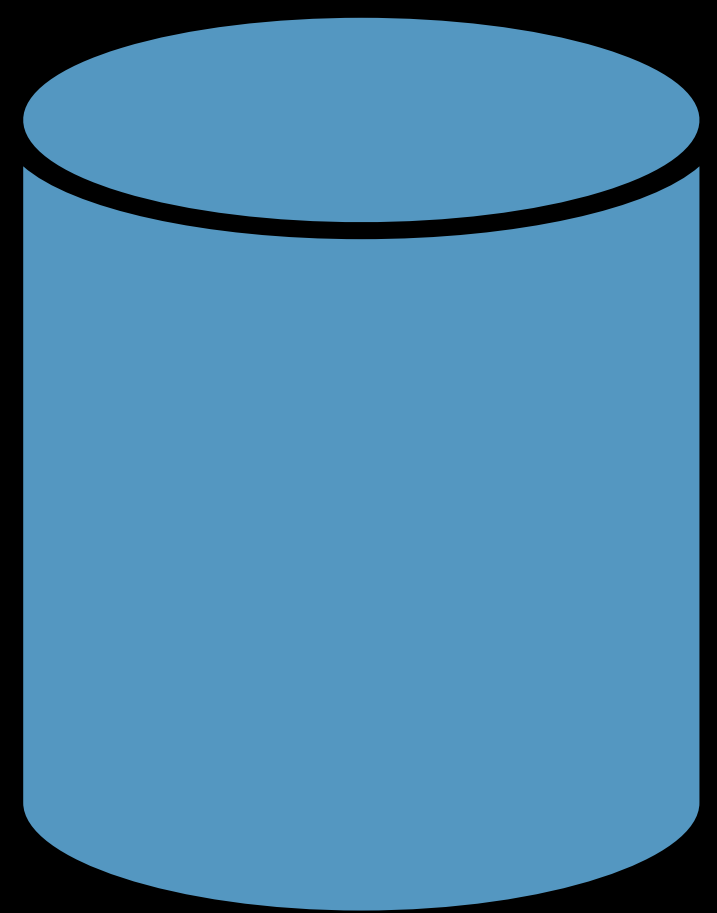
Pre-trained Model



Your Data



Pre-trained Model



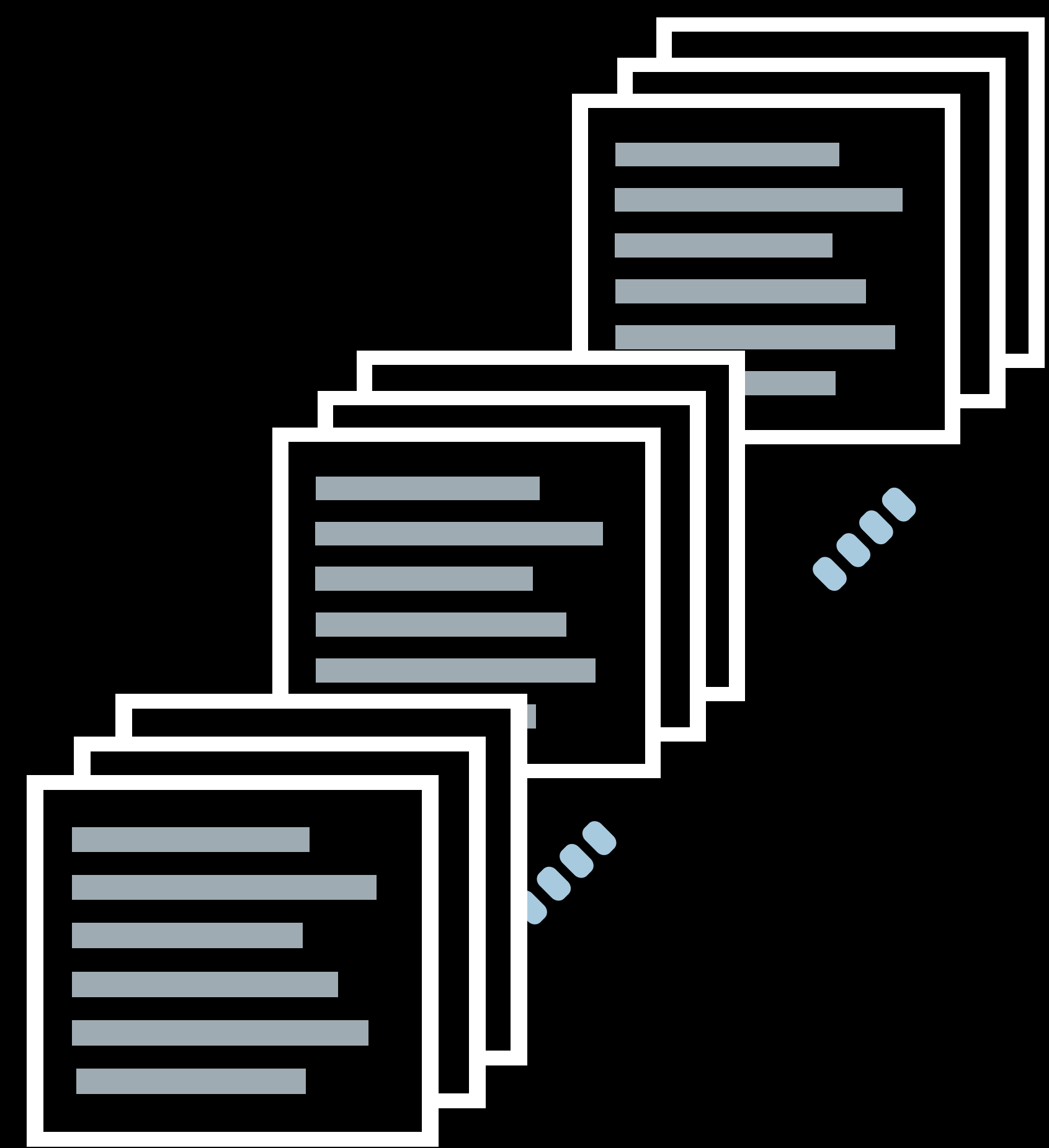
Your Data



Your Model

I was able to park my car near the park entrance.

I was able to park my car near the park entrance.

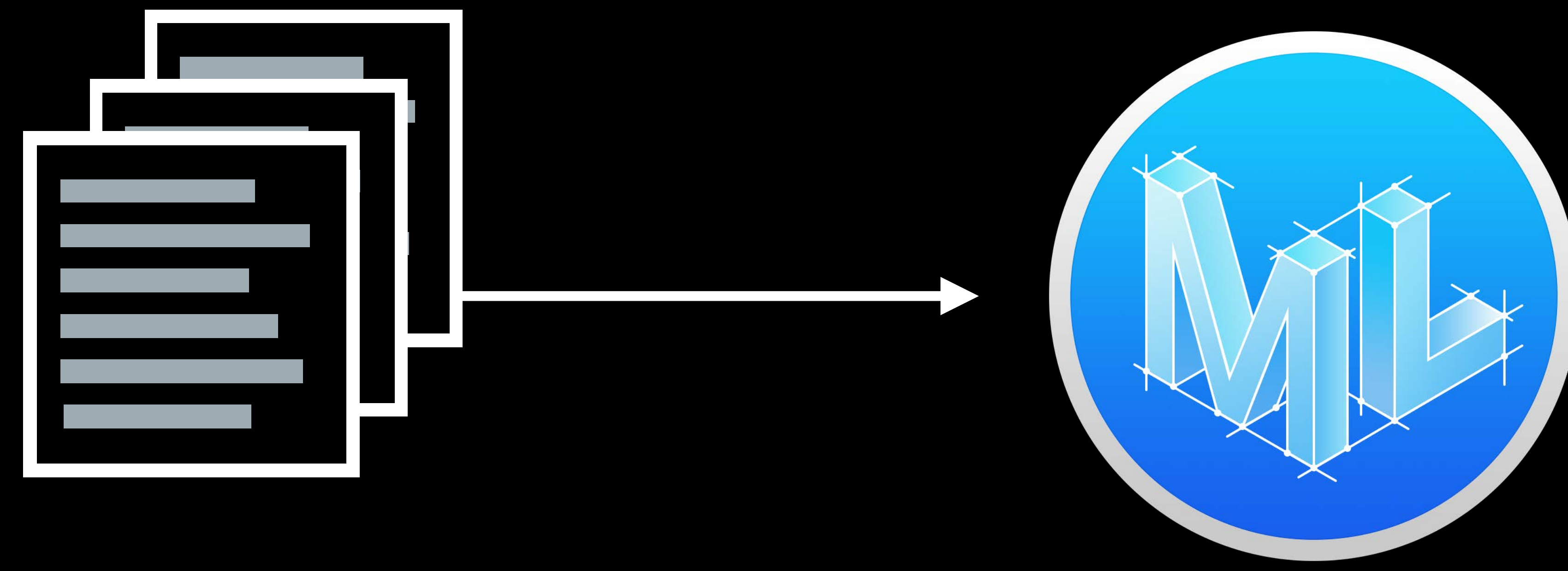




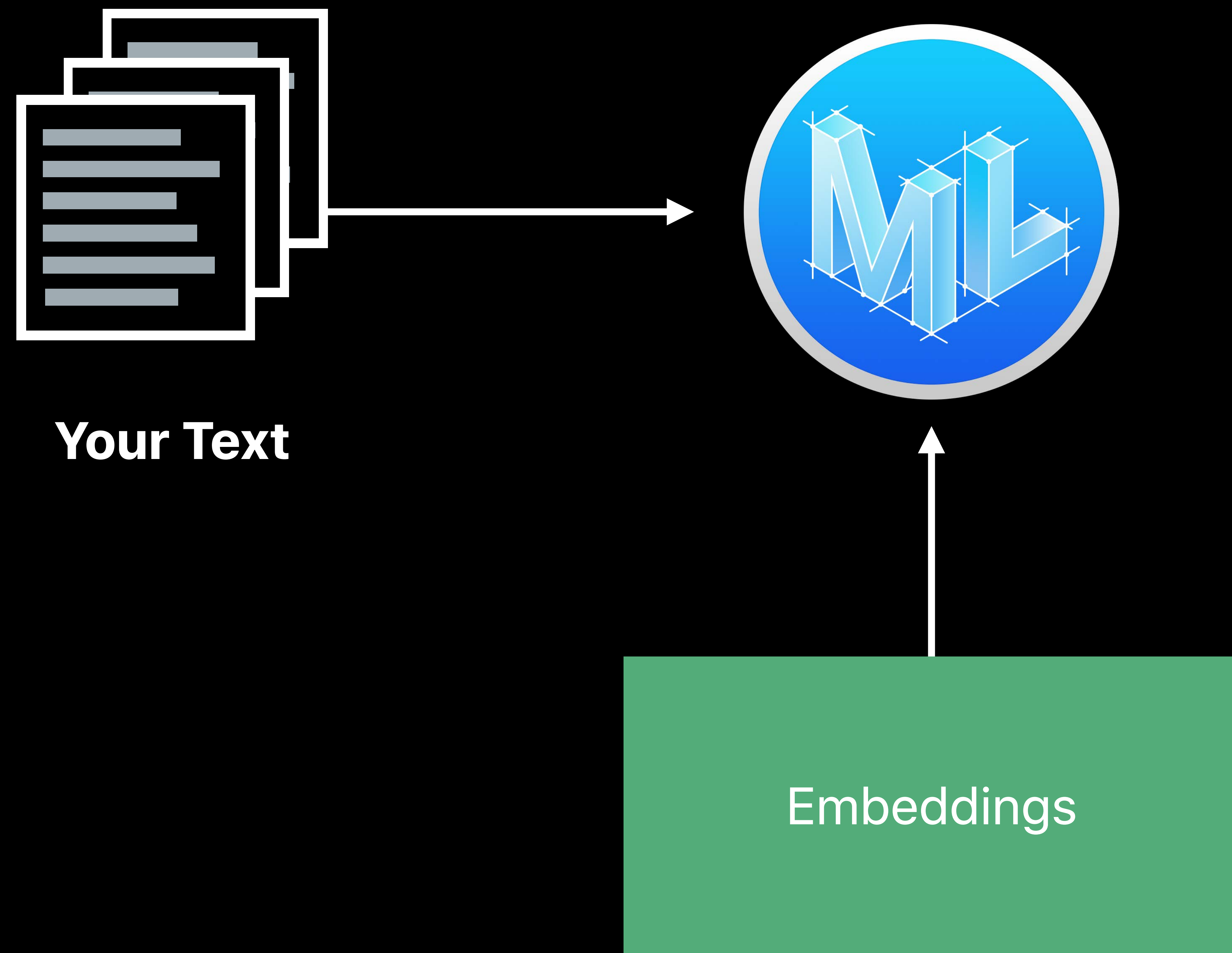


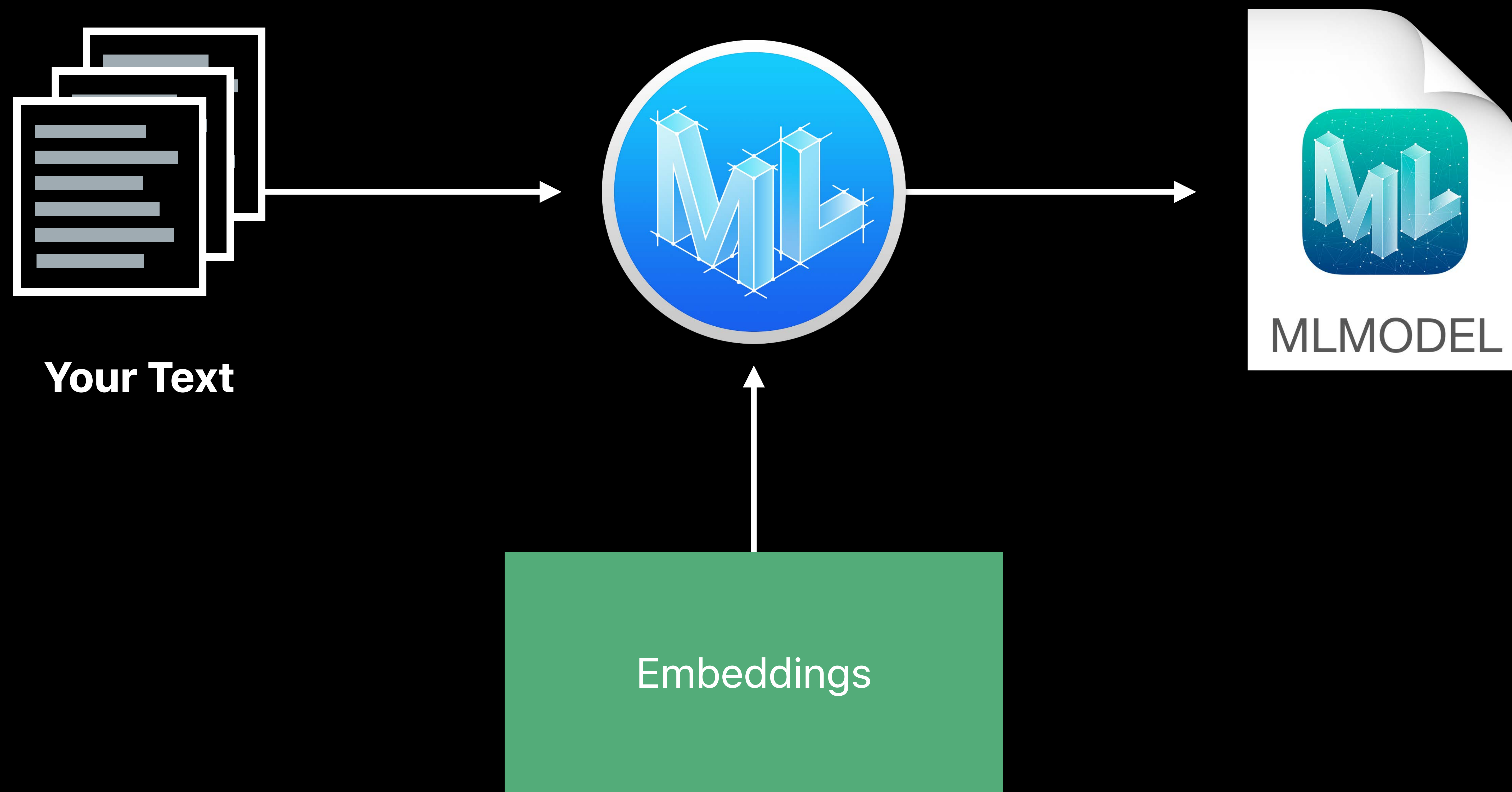


Your Text



Your Text





```
// Create Model using Transfer Learning
let parameters =
    MLTextClassifier.ModelParameters(algorithm: .transferLearning(.dynamicEmbedding))

let classifier = try MLTextClassifier(trainingData: .labeledDirectories(at: trainDirectory),
                                     parameters: parameters)

// Evaluate Model
let evaluation = classifier.evaluation(on: .labeledDirectories(at: testDirectory))

// Save Model
try classifier.write(to: writeToPath)
```

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Considerations

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Choose an algorithm that fits your use case best

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Choose an algorithm that fits your use case best

Provide balanced classes

Considerations

Choose an algorithm that fits your use case best

Provide balanced classes

Ensure data consistency

More Information

developer.apple.com/wwdc19/428

