Teaching the Machine

a story about learning to learn

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Machines Learn Just Like Babies

The Baby & Tot Show

CHIP ART LORD
Optical Recognition of Numerals

Utilize a machine learning model

Train to recognize numerals
Optical Recognition of Numerals
Optical Recognition of Numerals
Optical Recognition of Numerals

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176 . 75
Learning With
“K Nearest Neighbor ”
(KNN)
Categorization
Under the Hood of “KNN”
The MNIST Data Set

Input Training Data
60,000 / labeled / 28x28 / handwritten

Input Test Data
10,000 / unlabeled / 28x28 / handwritten
Finding the Best Variables

1) The Problem of Time

2) Value of “K”

3) Downsampling
Decoding the Data
Downsampling is More Important than ‘k’

% Accuracy

k

28 X 28 pixels

14 X 14 pixels

7 X 7 pixels
Downsampling Expedites Processing

![Graph showing time in seconds vs. downsampling resolution (28 x 28 pixels, 14 x 14 pixels, 7 x 7 pixels)]
The Road Ahead

Digital Trends

The Huffington Post
Thank You

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