

	<p>LOUISIANA STATE UNIVERSITY College of Agriculture School of Plant, Environmental, and Soil Sciences HTP in Plant Breeding</p>	
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Preprocessing data

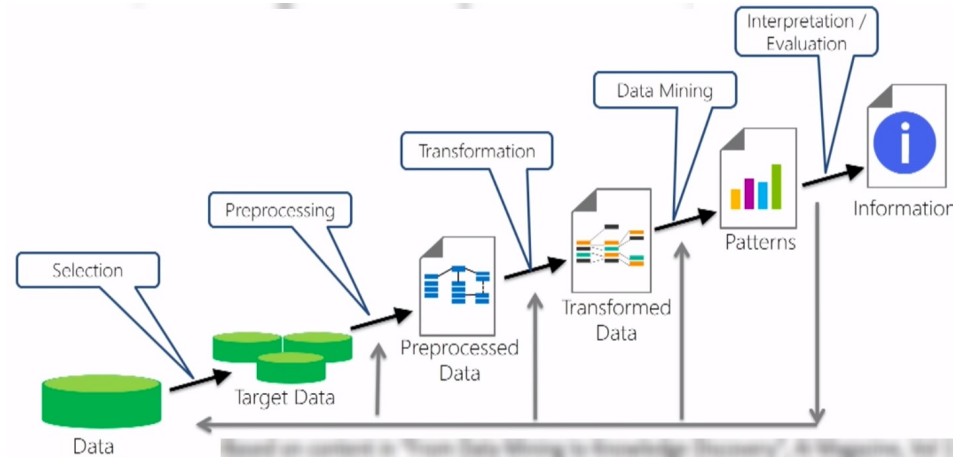
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Baton Rouge, April 3rd, 2024

KDD (Knowledge Discovery in Databases)

Definition : “*KDD is the non-trivial process of identifying valid, novel, potentially useful, and ultimately understandable patterns in data*”

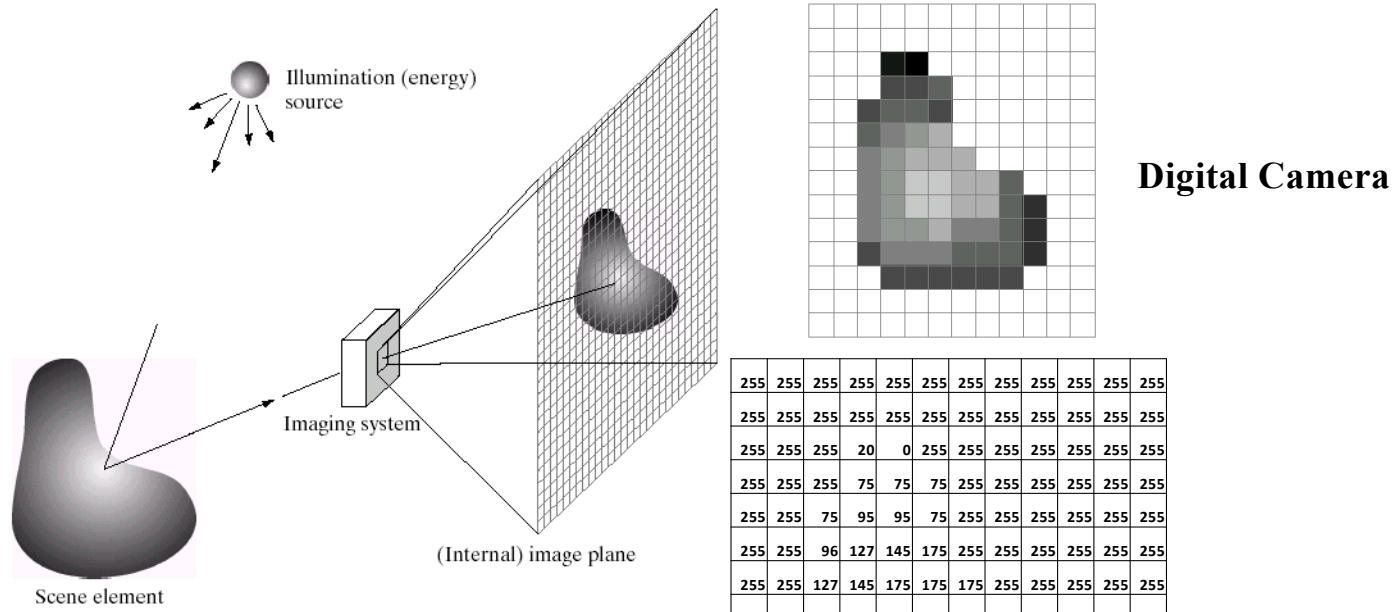


[CNN Explainer](#)

[Neural Network Playground](#)

[Interpretable machine learning](#)

Extracting numbers from an image



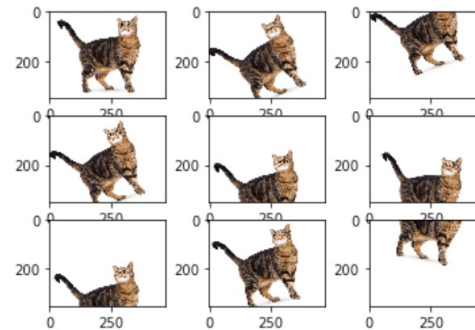
**Common to use one byte per value:
0 = black, 255 = white**

[illegible]

Convolutions kernels

Imagery augmentation

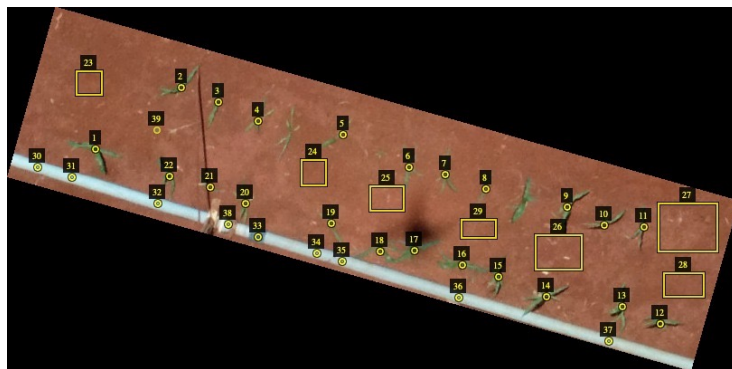
- **Artificial data generation in order to expand datasets as input for machine learning algorithms**
- **Mask, Elastic Distortions, perspectives, size, rotations, cropping, flip, and random erasing**



[Image augmentation](#)

Image annotation

- Task of annotating an image with labels
- The first methods learned the correlations between image features and training annotations
- Type of multi-class image classification with a very large number of classes - **as large as the vocabulary size**
- The AI methods try to translate the textual vocabulary with the '**visual vocabulary**', or clustered regions known as **blobs**



VGG tool

Image annotation

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