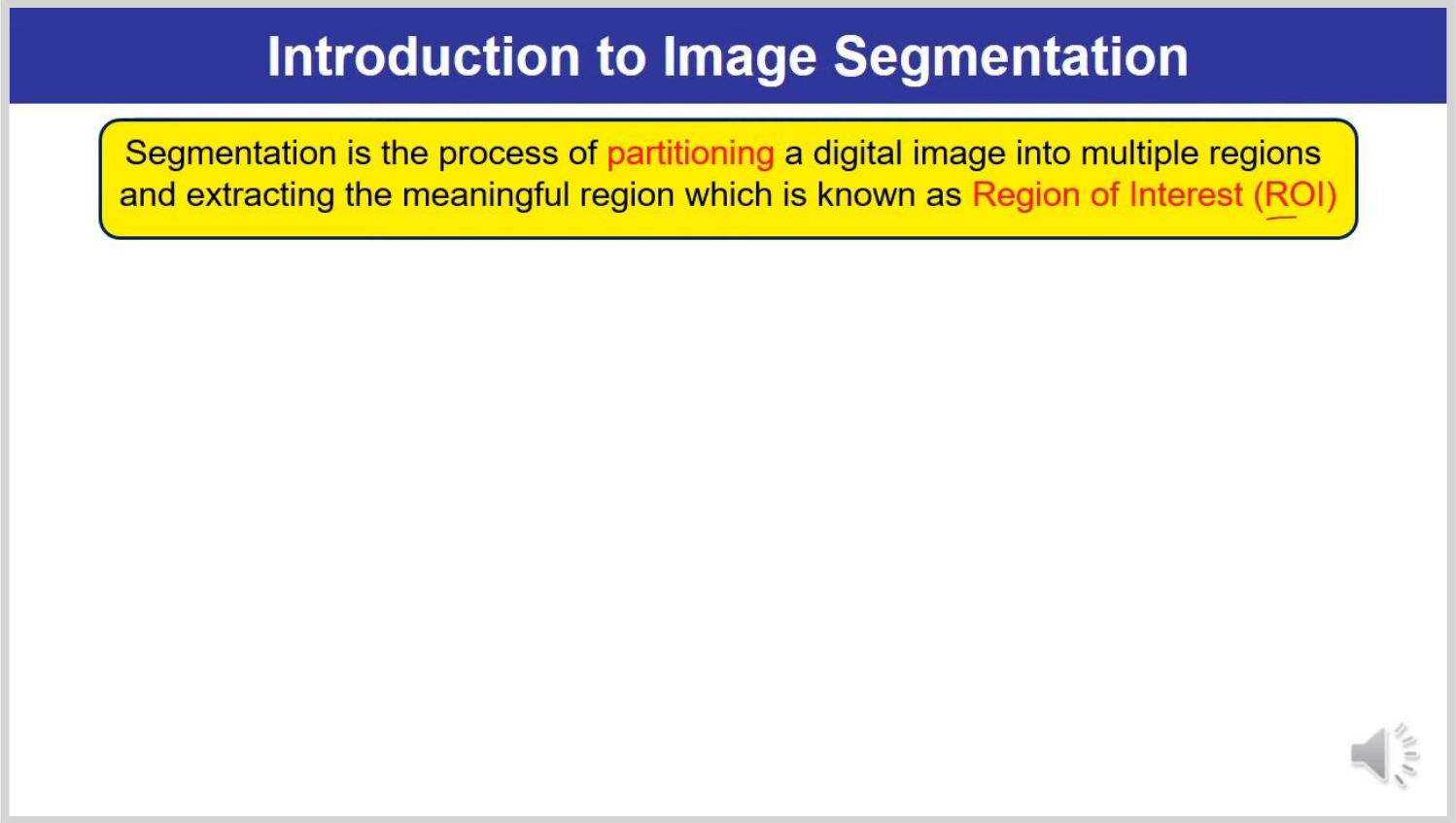
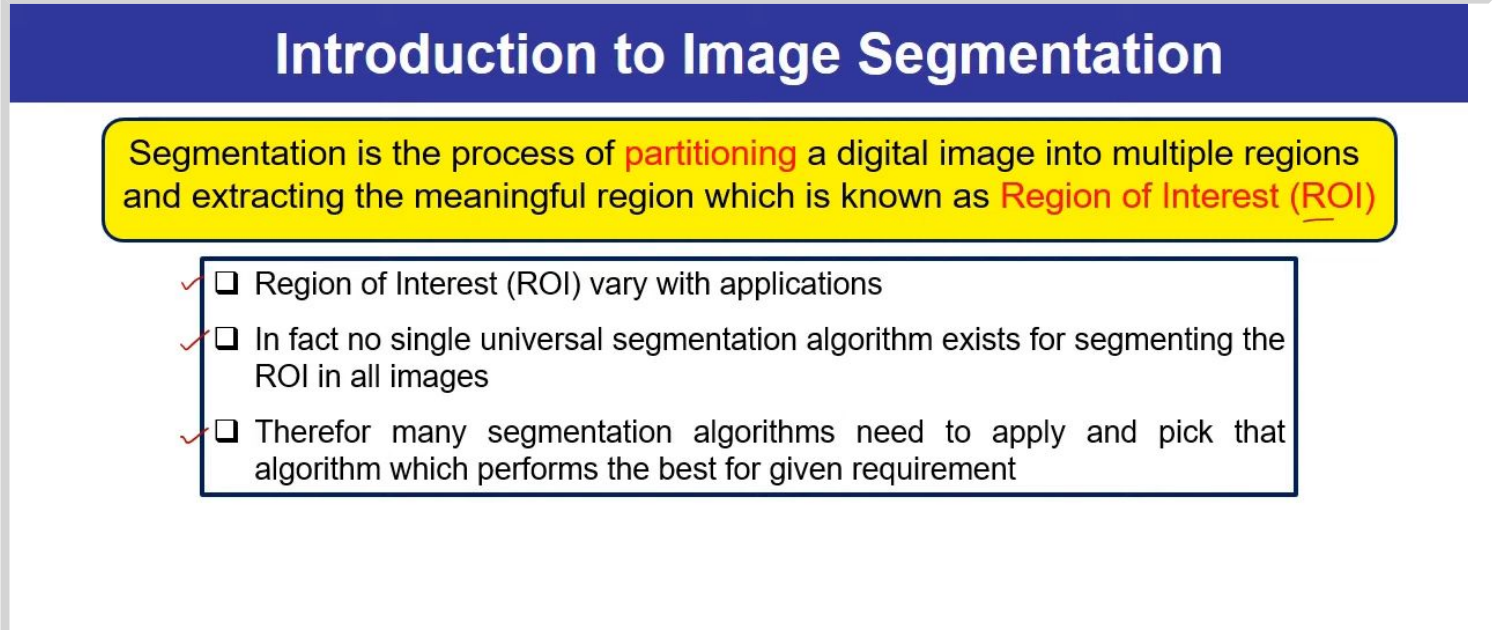
02:04

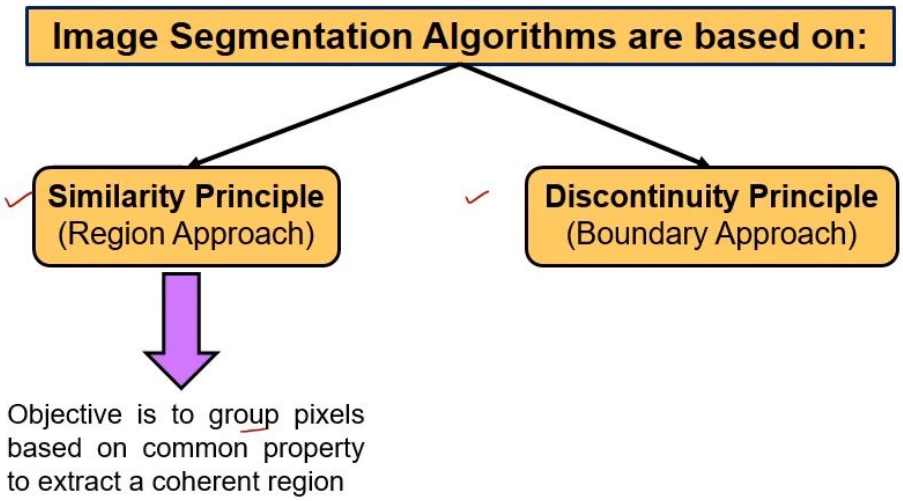


03:03



05:04

Introduction to Image Segmentation



05:37

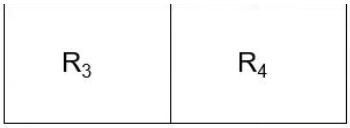
06:35

Introduction to Image Segmentation

Definition of Image Segmentation

An image can be portioned into many regions R_1, R_2, R_3…R_n

R_1	R_{21}	R_{22}
	R_{23}	R_{24}



08:44

09:33

Introduction to Image Segmentation

Characteristics of Segmentation Process

Let R represent the entire image region and Segmentation is partitioning R into n subgroups R_i

12:06

Introduction to Image Segmentation

Characteristics of Segmentation Process

Let R represent the entire image region and Segmentation is partitioning R into n subgroups R_i

- $\bigcup_{i=1}^{n} Ri = R$ $\quad i = 1, 2, \ldots n$ (R)
- Ri should be connected region :i=1,2,3,……..,n
- $Ri \cap R_1 = \emptyset \ (for\ all\ i\ and\ j): i \neq j$
- $P(R_i) = TRUE\ for\ i = 1,2,3, \ldots \ldots n$

12:52

Introduction to Image Segmentation

Characteristics of Segmentation Process

Let R represent the entire image region and Segmentation is partitioning R into n subgroups R_i

- $\bigcup_{i=1}^{n} Ri = R$ $\quad i = 1, 2, \ldots n$ (R)
- Ri should be connected region :i=1,2,3,……..,n
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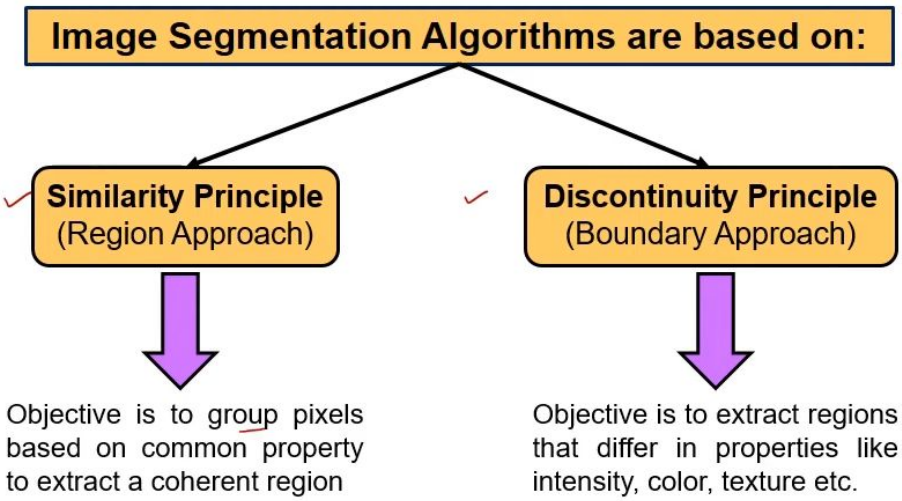
- $P(R_i) = TRUE\ for\ i = 1,2,3, \ldots \ldots n$
- $P(R_i \cup R_j) = FALSE\ for\ i \neq j$

Introduction to Image Segmentation



13:13

Introduction to Image Segmentation

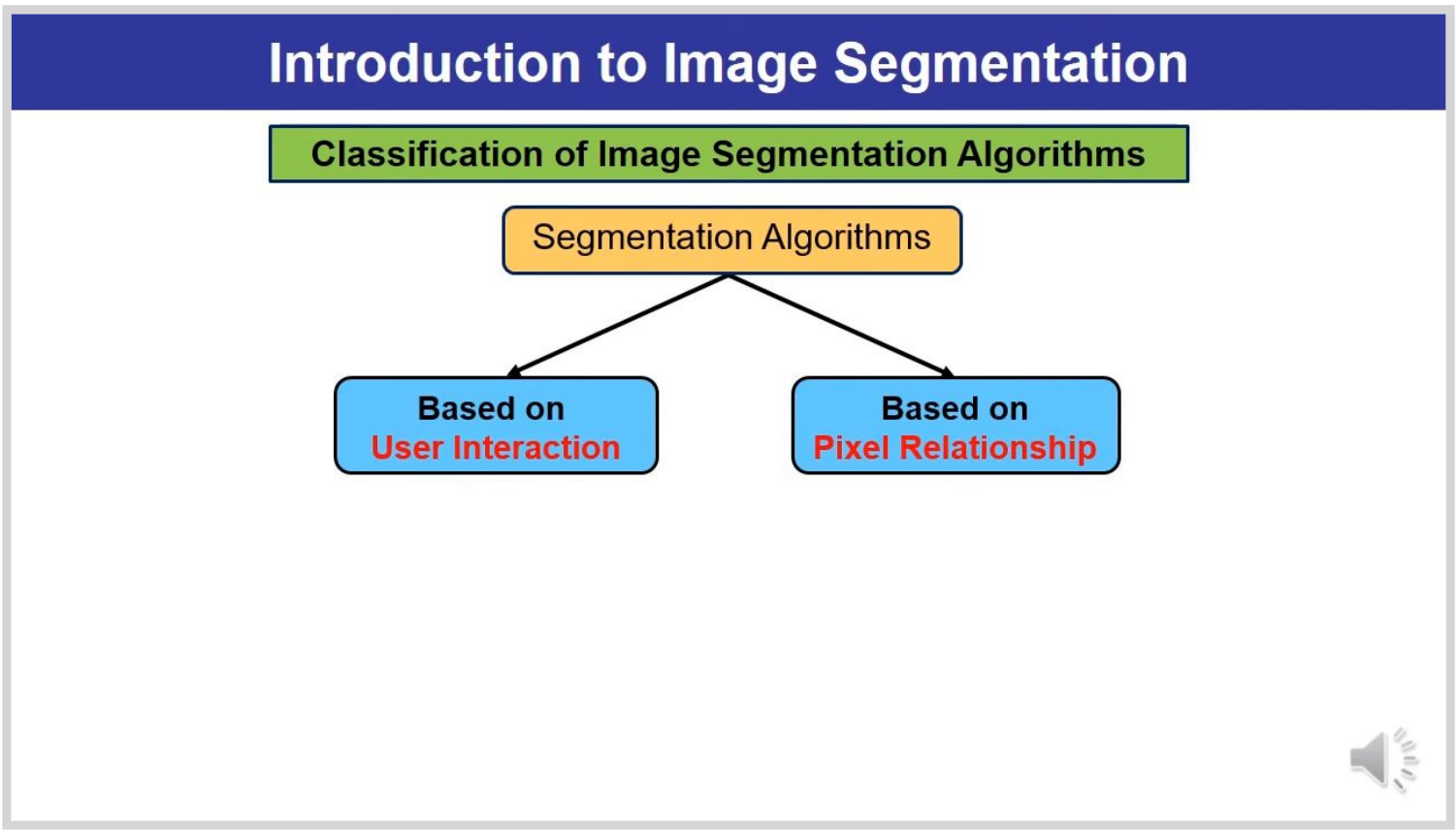
Characteristics of Segmentation Process

Let R represent the entire image region and Segmentation is partitioning R into n subgroups R_i

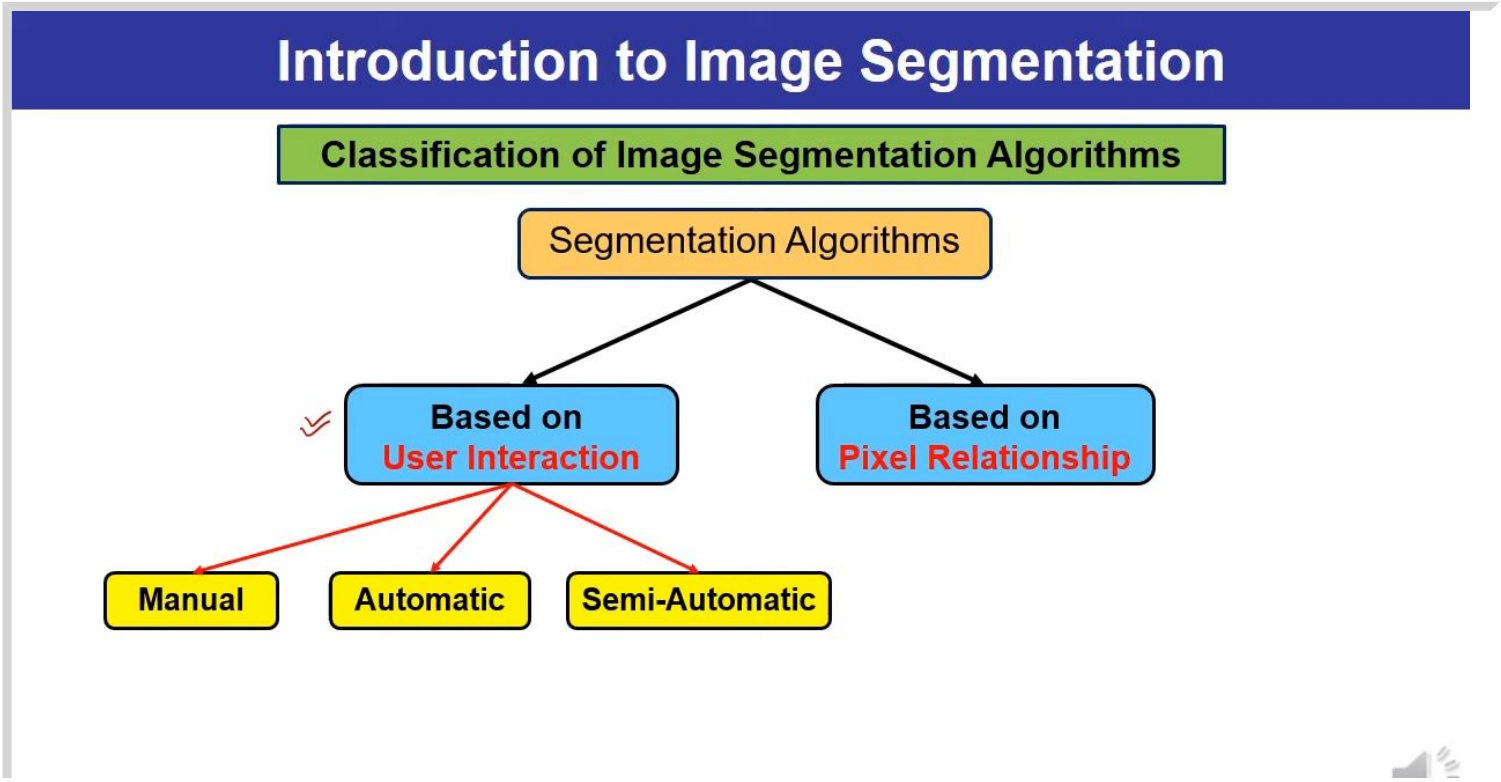
- $\bigcup_{i=1}^{n} Ri = R$ $\quad i = 1, 2, \ldots n$ (R)
- Ri should be connected region :i=1,2,3,……..,n
- $Ri \cap R_1 = \emptyset \ (for\ all\ i\ and\ j): i \neq j$
- $P(R_i) = TRUE\ for\ i = 1,2,3, \ldots \ldots n$
- $P(R_i \cup R_j) = FALSE\ for\ i \neq j$

Here P(R_i) is a predicate that indicates some property over the region

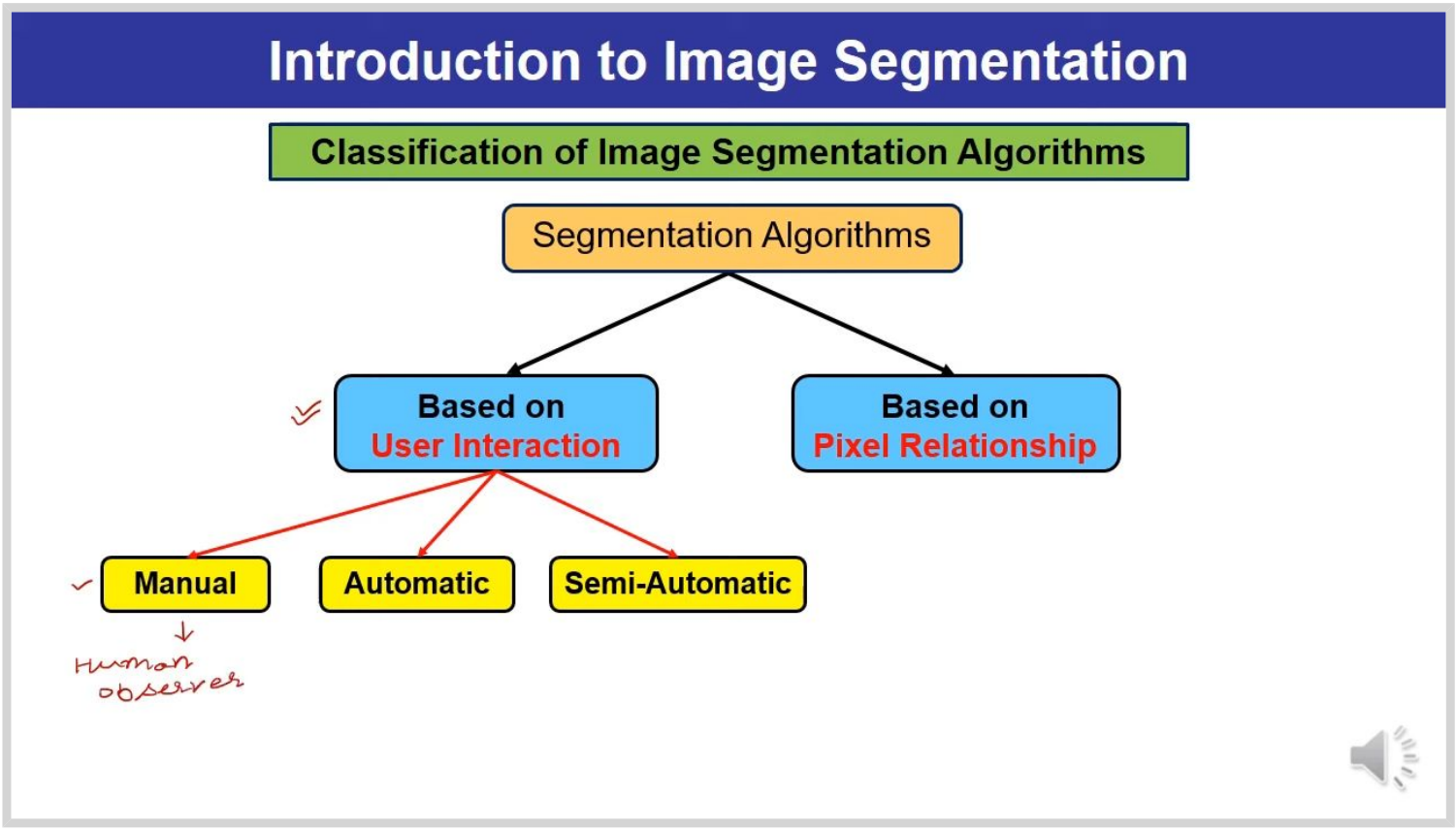
13:51


Introduction to Image Segmentation
Classification of Image Segmentation Algorithms
Segmentation Algorithms
Based on
User Interaction
Based on
Pixel Relationship

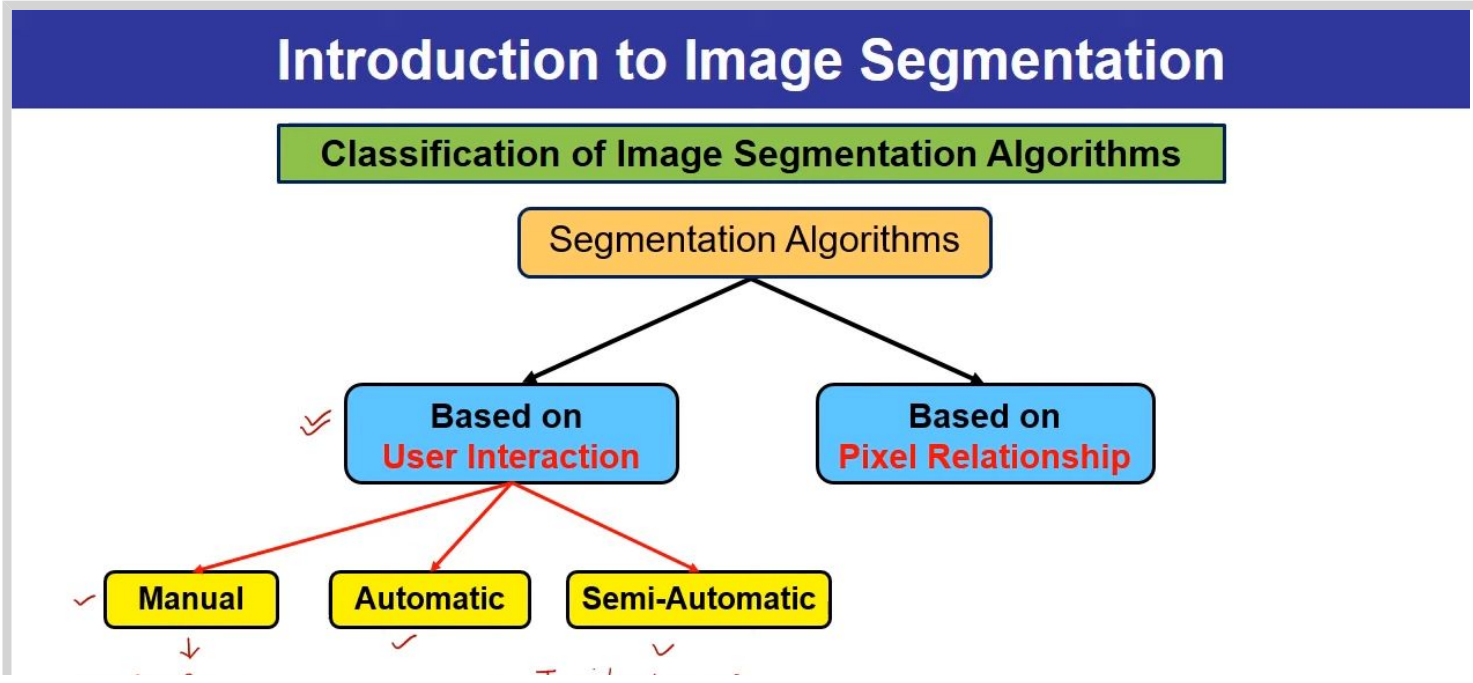
14:50


Introduction to Image Segmentation
Classification of Image Segmentation Algorithms
Segmentation Algorithms
Based on
User Interaction
Based on
Pixel Relationship
Manual
Automatic
Semi-Automatic

15:47


Introduction to Image Segmentation
Classification of Image Segmentation Algorithms
Segmentation Algorithms
Based on User Interaction
Based on Pixel Relationship
Manual
Automatic
Semi-Automatic
Human observer

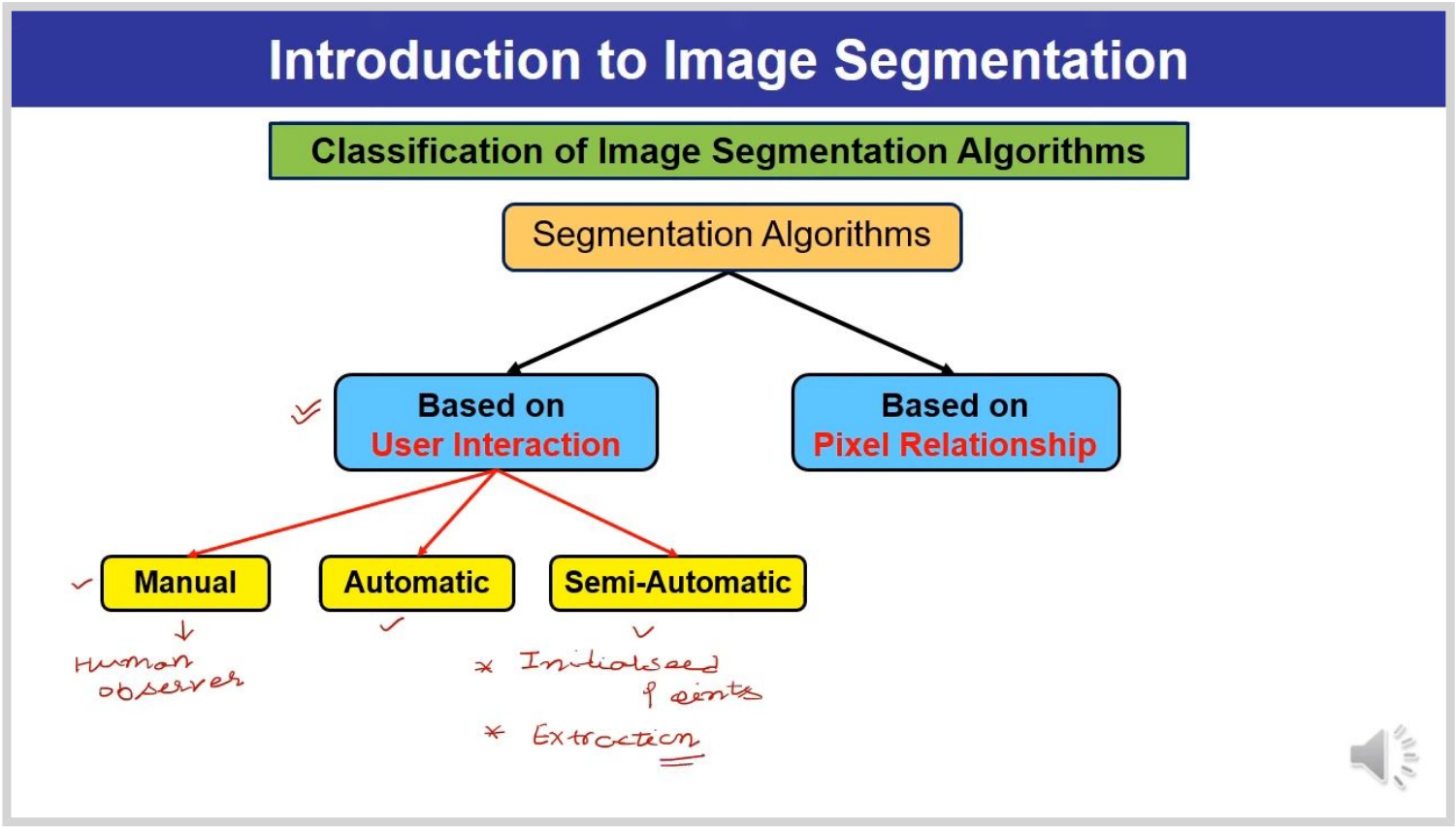
18:31


Introduction to Image Segmentation
Classification of Image Segmentation Algorithms
Segmentation Algorithms
Based on User Interaction
Based on Pixel Relationship
Manual
Automatic
Semi-Automatic

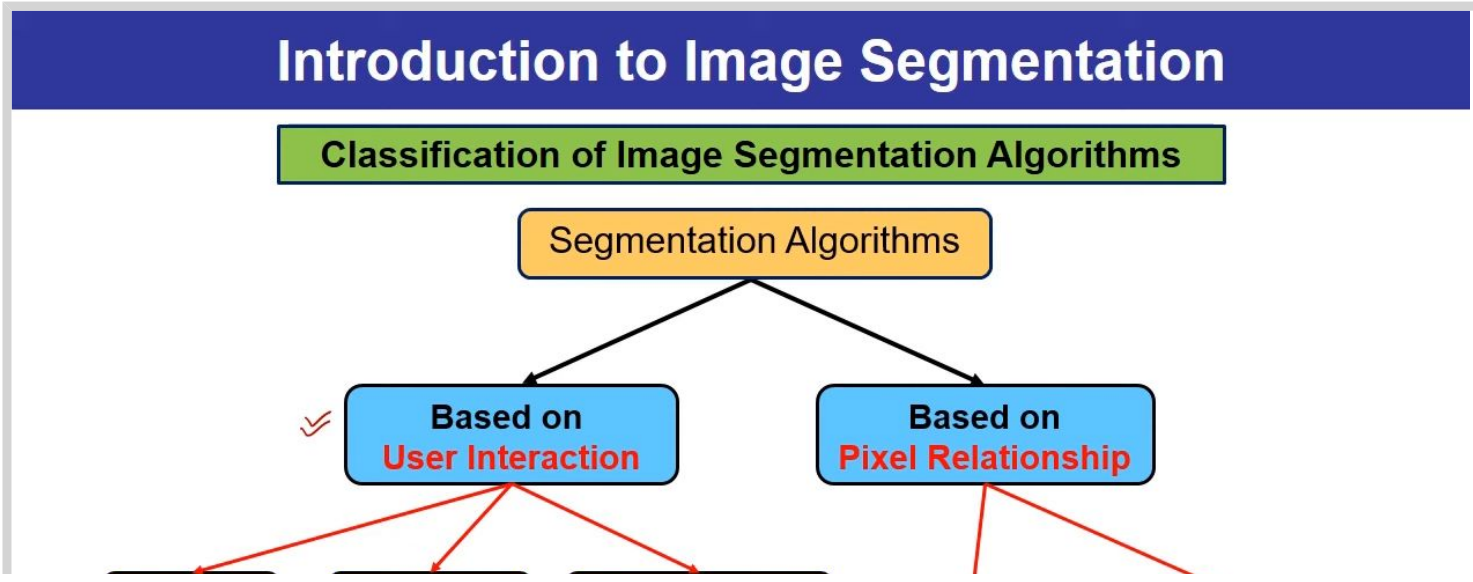
Human observer

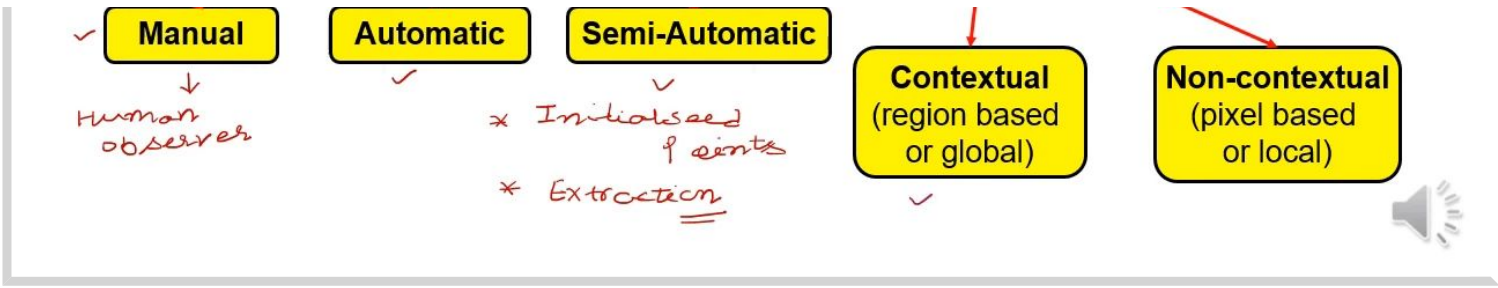
* Initialised points

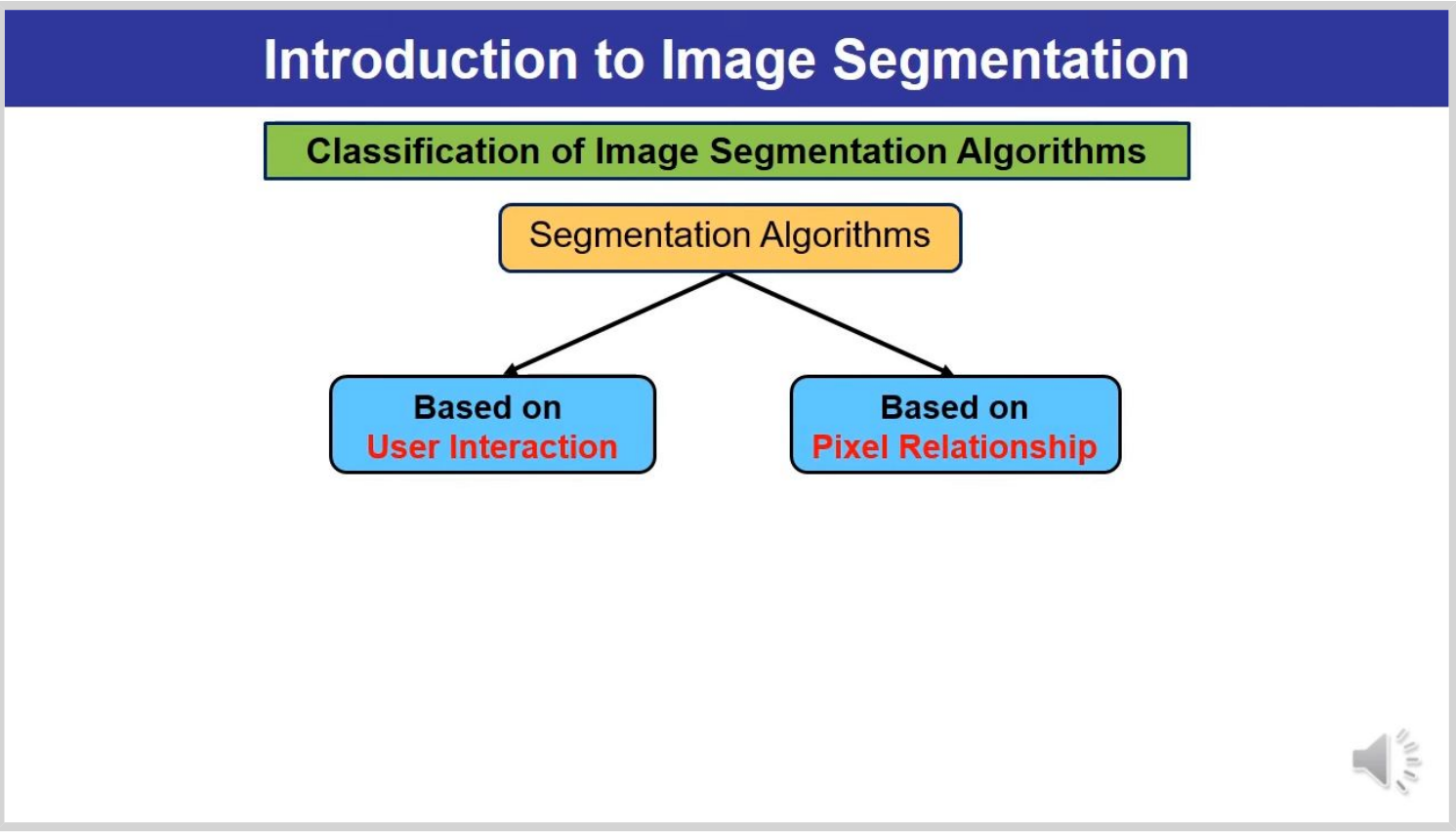
18:43



19:02




Manual
Automatic
Semi-Automatic
Contextual
(region based
or global)
Non-contextual
(pixel based
or local)
Human
observer
* Initialised
points
* Extraction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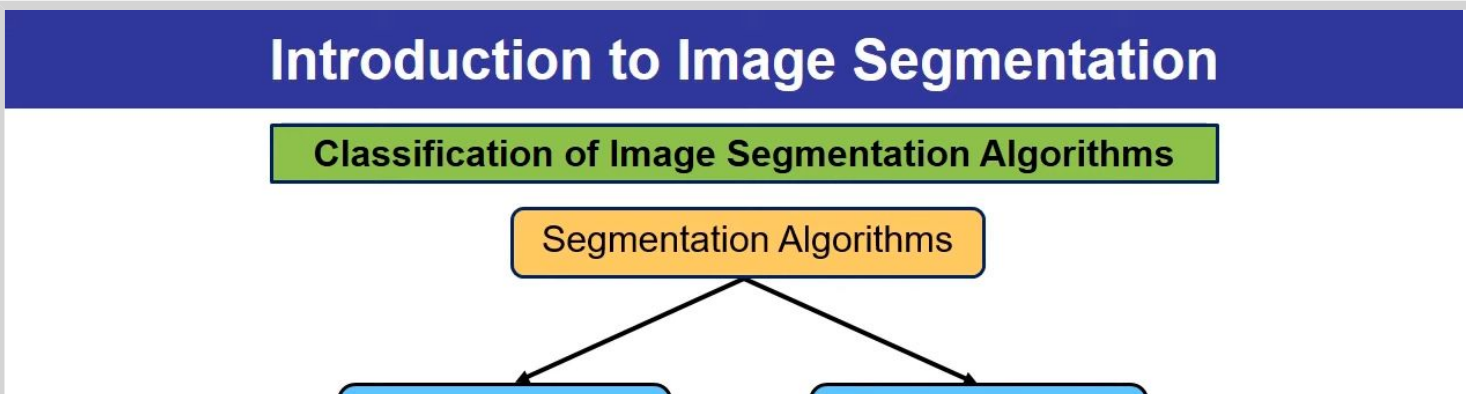
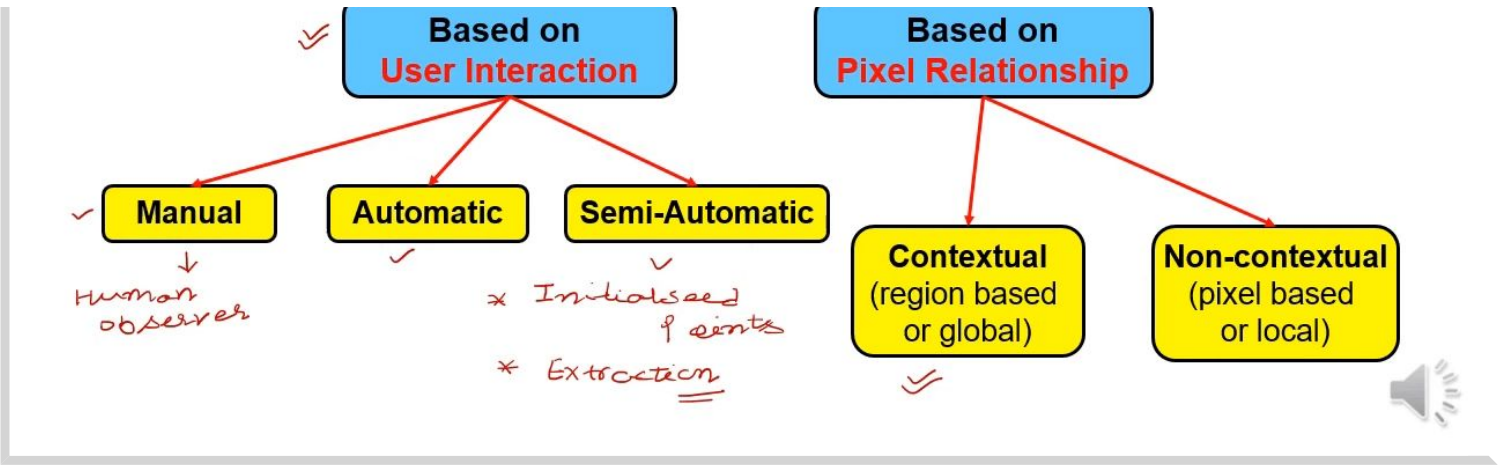
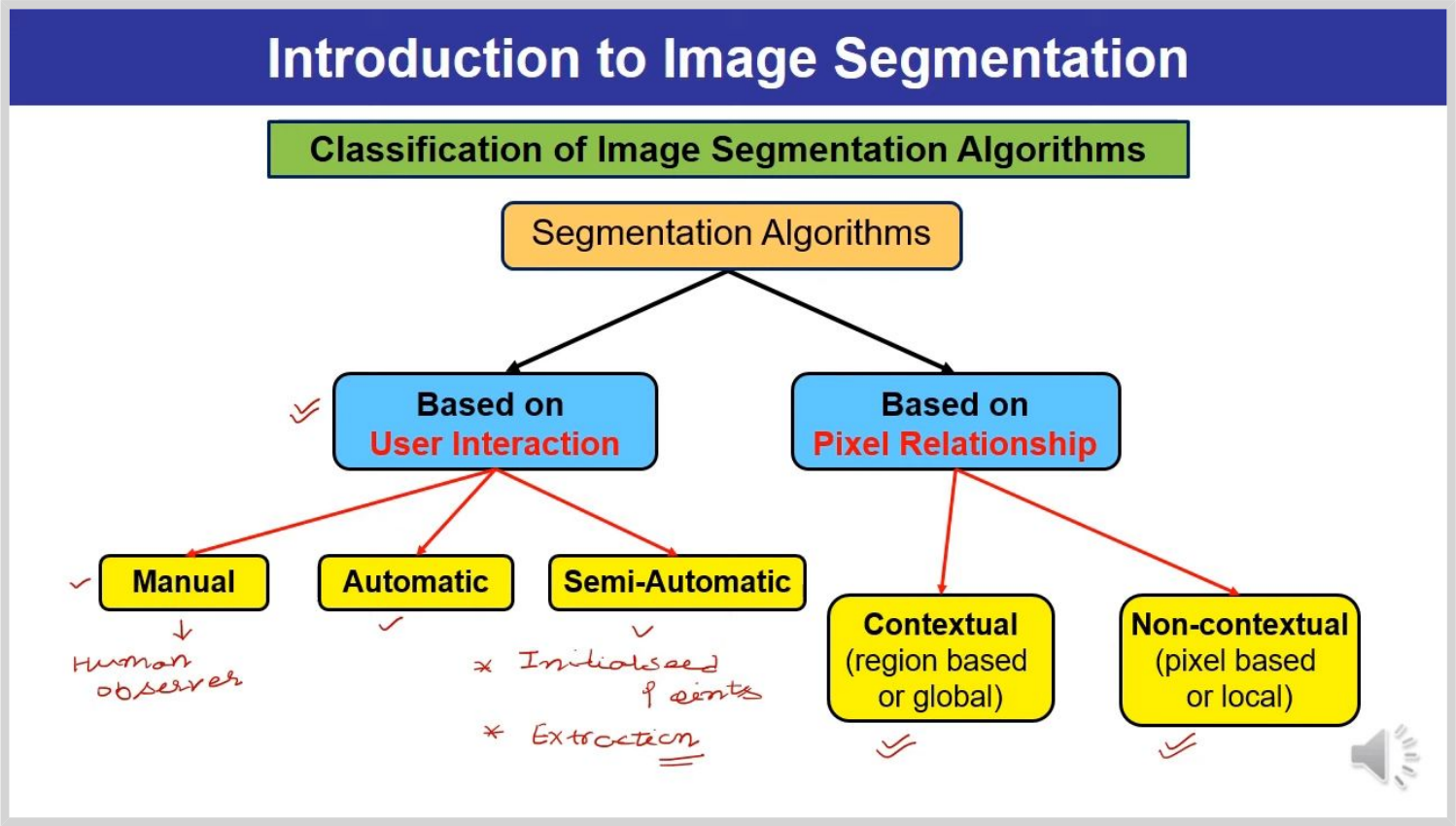
User Interaction
Based on
Pixel Relationship

19:15


Introduction to Image Segmentation
Classification of Image Segmentation Algorithms
Segmentation Algorithms


Based on
User Interaction
Based on
Pixel Relationship
Manual
Automatic
Semi-Automatic
Contextual
(region based
or global)
Non-contextual
(pixel based
or local)
Human
observer
Initial seed
points
Extraction

20:18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Semi-Automatic
Contextual
(region based
or global)
Non-contextual
(pixel based
or local)
Human
observer
Initial seed
points
Extraction