



UNIVERSITÀ DEGLI STUDI DI PADOVA

Introducing mid-level image processing Recall on derivative filters

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- From low-level to mid-level image processing
 - What is the difference? Discussion
- Edge detection filters – recall

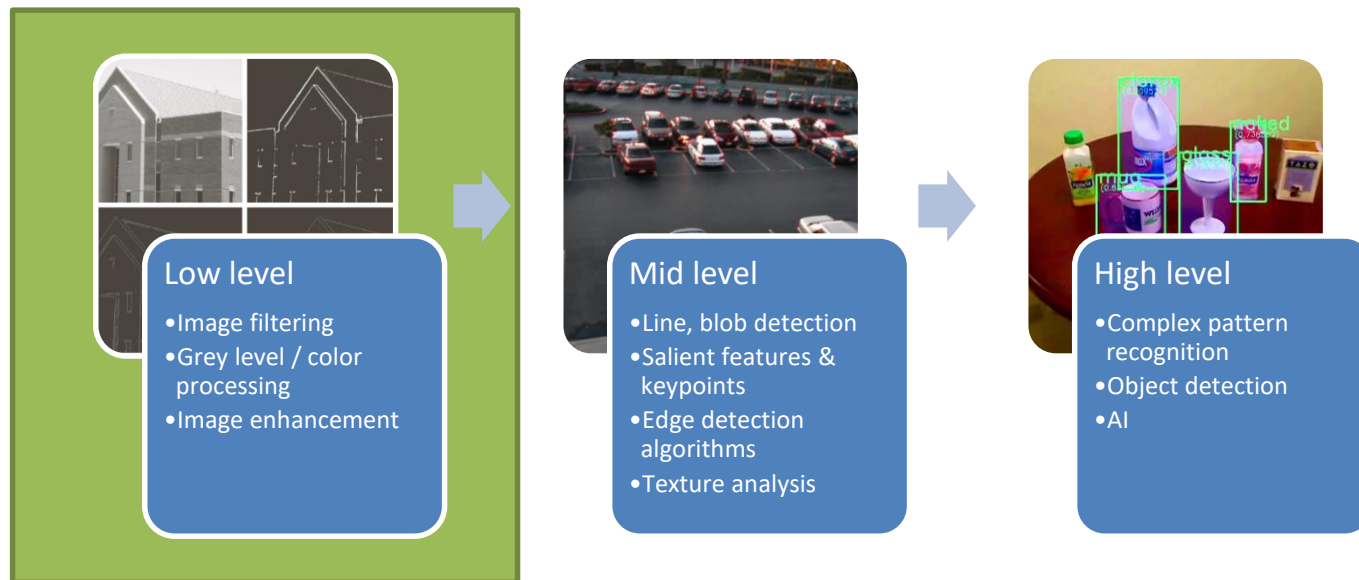


- So far, we have considered:
 - Single-pixel transforms
 - Local operators
 - Convolutional filtering
 - DFT
 - Image restoration
- What are the concepts behind these filters and processes?

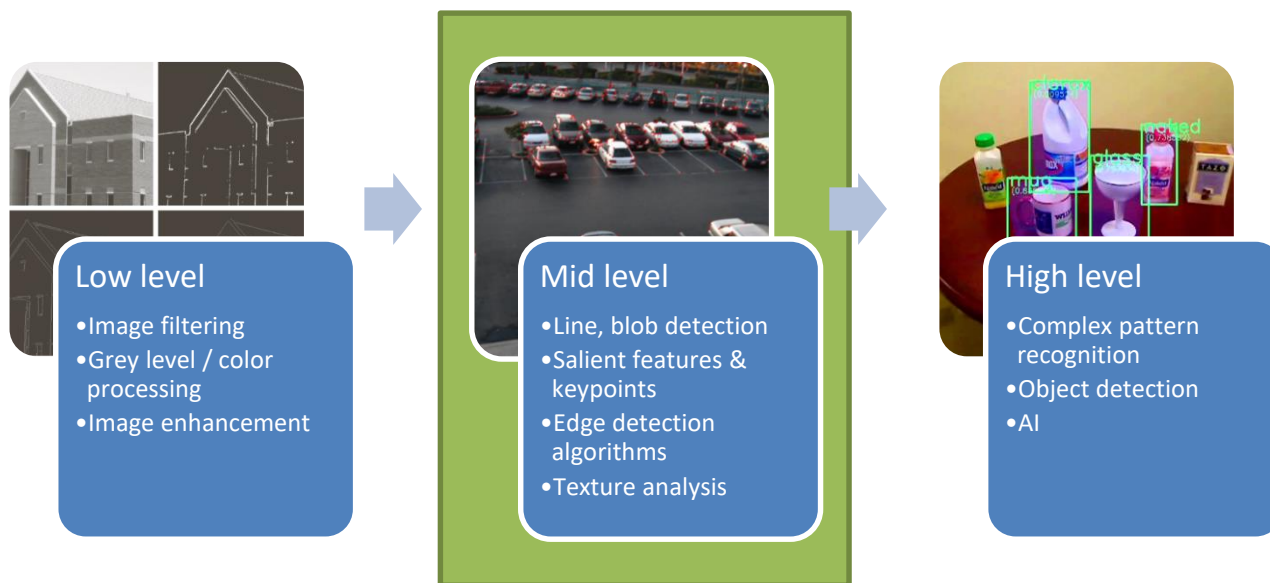


- The next step is mid level
- Which concepts do you think are involved in mid-level?

- Computer vision systems often start with an image enhancement module
 - Based on the image processing techniques discussed in this first part of the course



- Mid-level algorithms are based on more complex *models*
 - E.g.: a line, an edge





- We start our discussion on mid-level considering
 - Edge detection
 - Line detection



- Derivative filters highlighted edges in the image
 - Can they be considered edge detectors?



- Derivative filters highlighted edges in the image
 - Can they be considered edge detectors?
- Such filters highlight the edges in an image
- They highlight edge pixels
- Filtered images *lack the concept of edge*



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