

# weakly supervised learning



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graph LR; A[weakly supervised learning] --- B[incomplete supervision]; A --- C[inexact supervision]; A --- D[inaccuracy supervision]; A --- E[other supervision];
```

incomplete supervision 

inexact supervision 

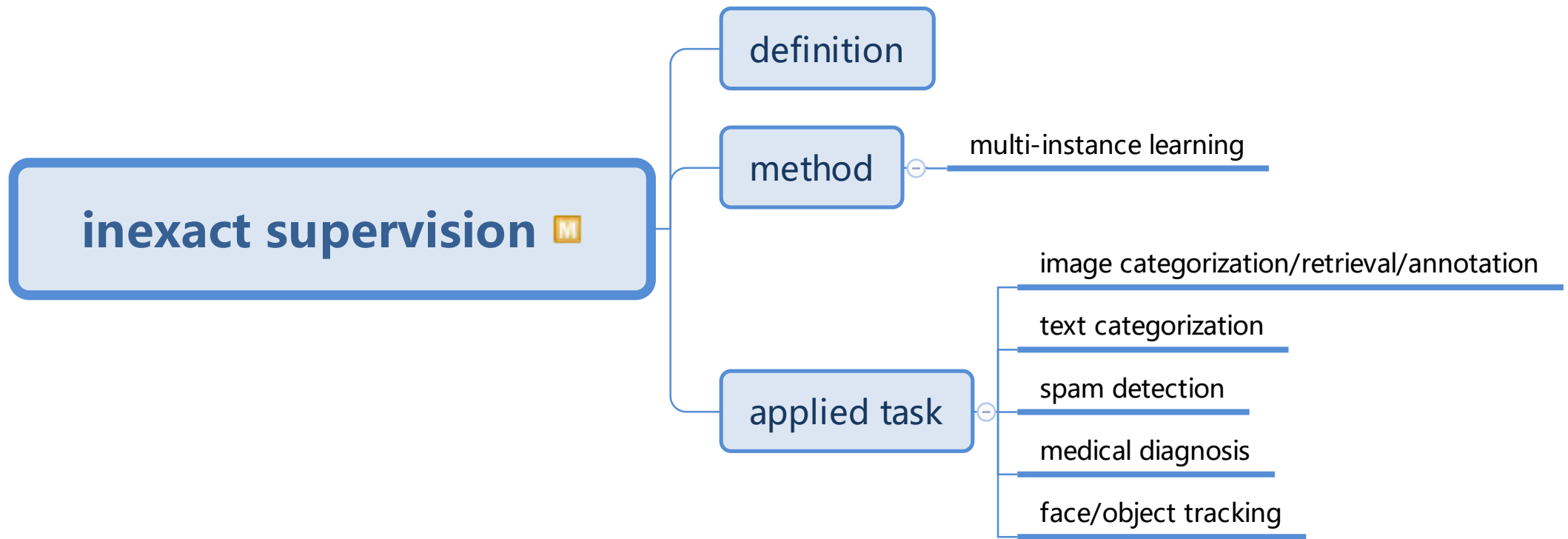
inaccuracy supervision 

other supervision

**incomplete supervision** 

with human intervene 

without human intervene 



# inaccuracy supervision

typical scenario

learning with label noise

basic idea and approach

identify the potentially mislabeled examples, and then try to make some correction. data-editing approach

recent interesting scenario

crowdsourcing

# with human intervene

goal

minimize number of queries

method

active learning

representativeness

label target

reduce the uncertainty of a statistical model

approach

uncertainty sampling

query by committee

weakness

rely seriously on labeled data for constructing initial model

unstable when there are only a few labeled data

informativeness

label target

represent structure of input pattern

weakness

depend heavily on cluster results dominated by unlabeled data

both

tip

noise problem should be considered

