

**Paul Viola** 





Image Databases are Proliferating we need search tools



**Scanners** 



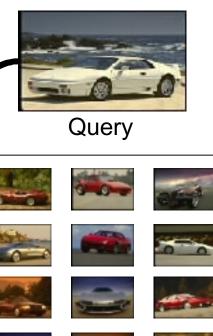
Digital cameras



Video cameras



Image Databases



Retrieval results



### 9807-NTT03: Image Database Retrieval

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- Development of a Novel Feature Set
  - Tuned to particular objects
  - Make learning much easier
  - Radically different in form from other features.
- Use of Boosting to improve learning and to increase performance.
  - Learning can use positive and negative examples
  - Learning is very fast
  - Final query is very efficient computationally

## 9807-NTT03: Image Database Retrieval

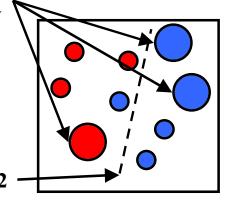
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# **Boosting**

weak classifier 1

re-weighted more heavily

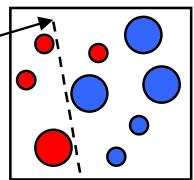


incorrect classifications

weak classifier 2

weak classifier 3

final classifier is weighted combination of weak classifiers



## New Features

