## VC-dimension for characterizing classifiers

Note to other teachers and users of these sildes. Andrew would be delighted if you found this source material useful in giving your own lectures. Feel free to use these sildes verbatim, or to modify them to fit your own needs. PowerPoint originals are available. If you make use of a significant portion of these sildes in your own lecture, please include this message, or the following link to the source repository of Andrew's tutorials: http://www.cs.cmu.edu/~awm/tutorials . Comments and corrections gratefully received. Andrew W. Moore Associate Professor School of Computer Science Carnegie Mellon University www.cs.cmu.edu/~awm awm@cs.cmu.edu

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## Using VC-dimensionality

That's what VC-dimensionality is about

People have worked hard to find VC-dimension for..

- Decision Trees
- Perceptrons
- Neural Nets
- Decision Lists
- Support Vector Machines
- And many many more

## All with the goals of

- 1. Understanding which learning machines are more or less powerful under which circumstances
- 2. Using Structural Risk Minimization for to choose the best learning machine

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VC-dimension: Slide 33













