

# Critique Format

Please format your critiques with roughly the following sections (in this order)

- 1 Reviewer: your name and the date
- 2 Citation: the title, author, year, and publication citation of the paper
- 3 A one paragraph summary (abstract) of the topic area.
- 4 A short overview of each paper including a) key ideas, b) technical approaches and c) results. Pay particular attention to the use of the mathematical method we are discussing in class at that time.
- 5 Comparison with other papers you have read, including strong points and weak points of this paper with respect to others.
- 6 Questions and issues this raises in your mind

# Critique Format

Critiques are graded on a three-level scale: check-minus, check, check-plus. Above average resourcefulness, initiative, creativity and depth of analysis gets a check-plus. Missing any required sections (1-6) or obvious lack of effort on any of them results in a check-minus.

**Pay attention to your spelling and grammar of English. :-)**

# How to Give a Presentation

Prepare to give a roughly <sup>10</sup>~~12~~ minute presentation, with 3 minutes for questions/discussion at the end. A rough rule of thumb is that 1 slide = 1 minute.

Should look like an oral critique with slides, but with expanded emphasis on explaining how the topic we are covering in class is used to solve the problem considered in the paper.

Most important:

- avoid cluttered, wordy presentations with lot of dense math
- strive for clear, intuitive presentation
- pictures help get the idea across

# How to Give a Presentation

*From Stephen Scott's tips on giving a presentation*

## Concept Class of One-Dimensional Patterns

- The instance space  $\mathcal{X}_n$  consists of all configurations of  $n$  points on the real line
- A concept is set of all configs. from  $\mathcal{X}_n$  within unit distance under Hausdorff metric of some "ideal" configuration of  $k$  points, where Hausdorff distance between configs.  $P$  and  $Q$  is

$$H(P, Q) = \max \left\{ \max_{p \in P} \left\{ \min_{q \in Q} \{d(p, q)\} \right\}, \max_{q \in Q} \left\{ \min_{p \in P} \{d(p, q)\} \right\} \right\}$$

and  $d(p, q)$  is distance between  $p$  and  $q$

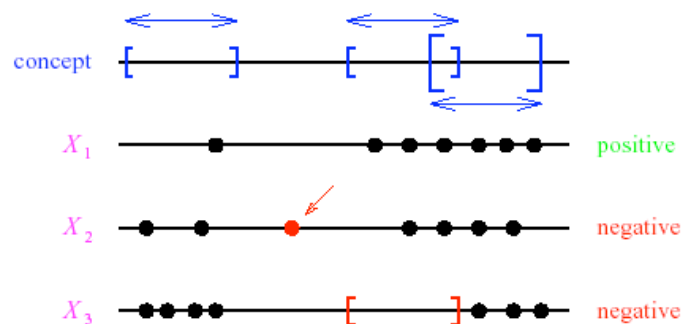
- If  $P$  is any configuration of points on  $\mathbb{R}$ , then concept corresponding to  $P$  is  $C_P = \{X \in \mathcal{X}_n : H(P, X) \leq 1\}$
- $X$  is a positive example of  $C_P$  if  $X \in C_P$  and is a negative example otherwise
- Concept class of one-dimensional patterns is  $\mathcal{C}_{k,n} = \{C_P : P \text{ is a configuration of } \leq k \text{ points from } \mathbb{R}\}$

9

**BAD**

## Concept Class of One-Dimensional Patterns

- Each **concept**  $c$  is a set of fixed-width intervals on real line
- Each **example**  $X$  is a set of points on real line
- Example  $X$  is **positive** if and only if:
  - each of  $X$ 's points lies in an interval from  $c$
  - each interval of  $c$  contains a point from  $X$



10

**BETTER**