

Full Title

subtitle

Alican Büyükçakır

`alicanbuyukcakir@bilkent.edu.tr`

`http://abuyukcakir.github.io`

Bilkent Information Retrieval Group – Computer Engineering Department
Bilkent University

Event Name, City, Country.
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Outline

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Motivation

Lorem ipsum dolor sit amet?



Challenges of Data Streams

Data streams are environments where vast amounts of (possibly infinite) data are generated at high speed. Challenges [Bifet et al., 2009]:

- 1 Can see the data once and only once.
- 2 Should be able to predict at any time.
- 3 Memory constraint.
- 4 Robustness to concept drifts.



Multi-label Classification

When a data instance is classified into:

- just one label $\lambda \in \mathcal{L}$: single-label classification.
- one or more (a subset of) labels $L^* \subseteq \mathcal{L}$: multi-label classification (MLC).
 - For L -many labels, 2^L possible label sets. Combinatorial explosion?

Examples

Gene function prediction, text categorization and tagging, movie genre classification, image scene classification, ...

Problem Definition

You can insert figures as follows...

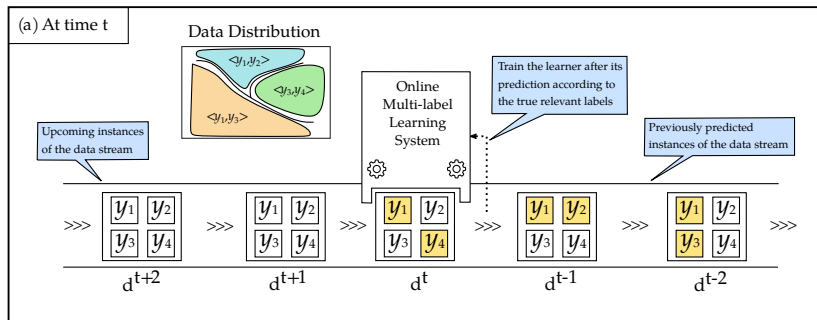


Figure: MLSC task. with $L = 4$. Labels predicted as relevant are filled with yellow. Also, see ITTT (interleaved-test-then-train).



Related Work

We need to know two things:

- ① How are multi-label problems tackled in general?
- ② What do the ensembles in MLSC task generally do?



Main Work

Alert Block Title

Alert block has a title and it s red.

The basis

Block is of the same color of the presentation itself. Can also use items in blocks

- split
- whale
- rounded
- orchid



Statistical Significance

We used Friedman test with Nemenyi post-hoc analysis [Demšar, 2006].



Discussion

- Easy to use
- Good results

References I



Bifet, A., Holmes, G., Pfahringer, B., Kirkby, R., and Gavaldà, R. (2009).

New ensemble methods for evolving data streams.

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