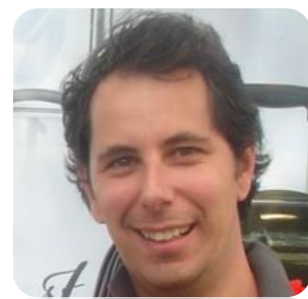




Time-Matters: Temporal Unfolding of Texts

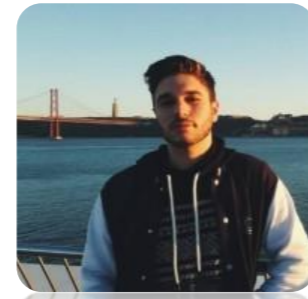
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Try it out, get in touch



<http://time-matters.inesctec.pt>



GitHub

<https://github.com/liaad/time-matters>



{api}

<http://time-matters.inesctec.pt/api>



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Overview

Motivation:

- Information overload problem
- Abundance of textual content
- Single Doc Timeline Summarization

Contributions:

- Detection of important time references
- Temporal Storyline Components

Features:

- Unsupervised
- Domain / Corpus / Language-Independent

Demo

The demo interface shows a 'Free text input' field where a paragraph about the 2010 Haiti Earthquake Anniversary is pasted. Below the input is a 'Timeline' view showing a horizontal axis with a highlighted event at 1975-02-11. To the right, a 'Scores' panel lists extracted temporal expressions with their scores: '1564' (Score: 0.799), '1975-02-10' (Score: 0), '1975-02-11' (Score: 0), and '2010' (Score: 0.983). The interface also includes a 'Storyline' view and a 'Temporal Clustering' view.

Applications



News Articles



Legal Documents



Clinical Documents



Historical/Long/Bio Documents

How did we do it?

$$GTE(t_i, d_j) = \text{median}(IS(w_{e,j}, d_j)), w_{e,j} \in W_j^*$$

$$IS(w_{e,j}, d_j) = \frac{\sum_{i \in X} \sum_{j \in Y} \text{Dice}(i, j)}{\left(\frac{\sum_{i \in X} \sum_{j \in X} \text{Dice}(i, j) + \sum_{i \in Y} \sum_{j \in Y} \text{Dice}(i, j)}{2} - \sum_{i \in X} \sum_{j \in Y} \text{Dice}(i, j) \right)}$$

where X and Y are the context vectors of $w_{e,j}$ and d_j respectively:

