

Feature Selection

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- Term ranking — fast computation (stream of messages).
- Small sets of words — comprehensible output.

Term Ranking

	Doc	Terms			
		<i>cat</i>	<i>dog</i>	<i>beer</i>	<i>milk</i>
Rel	A	1	1	0	0
	B	1	0	0	1
	C	0	1	1	0
Irr	U	0	1	0	1
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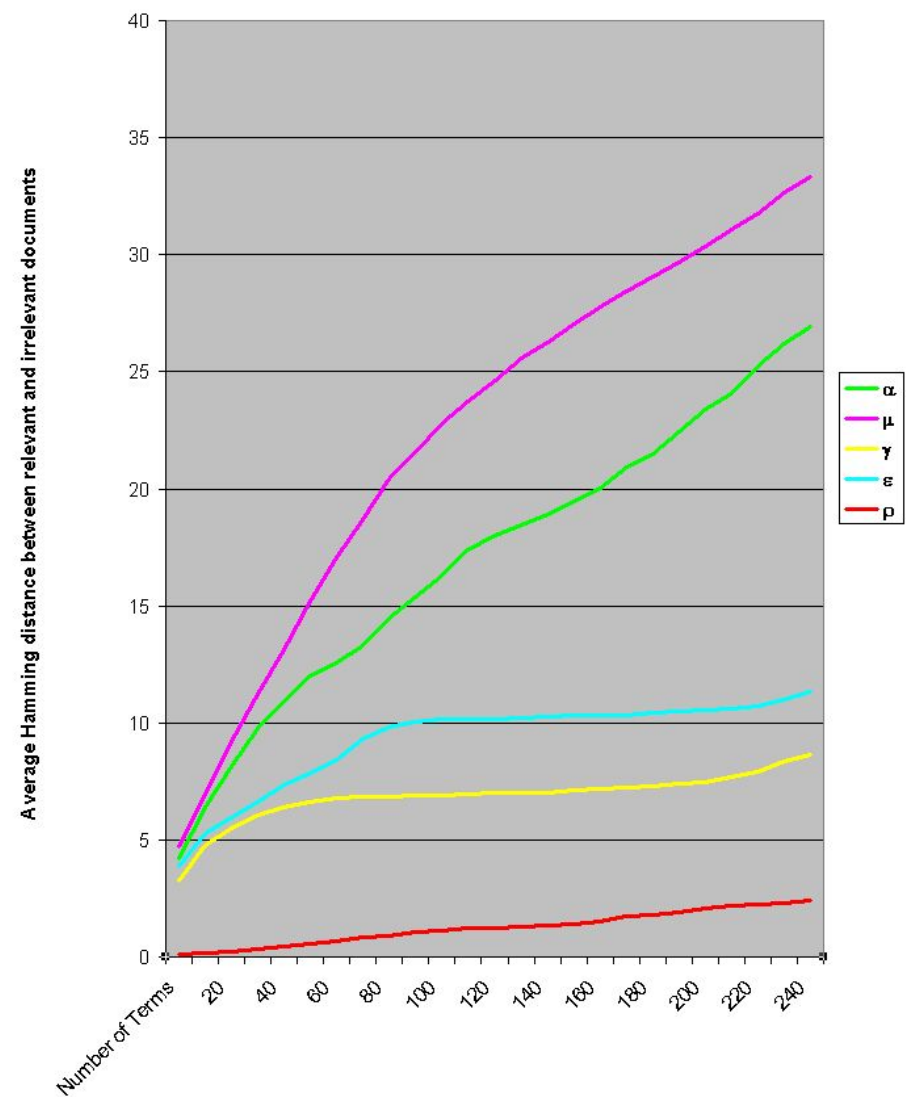
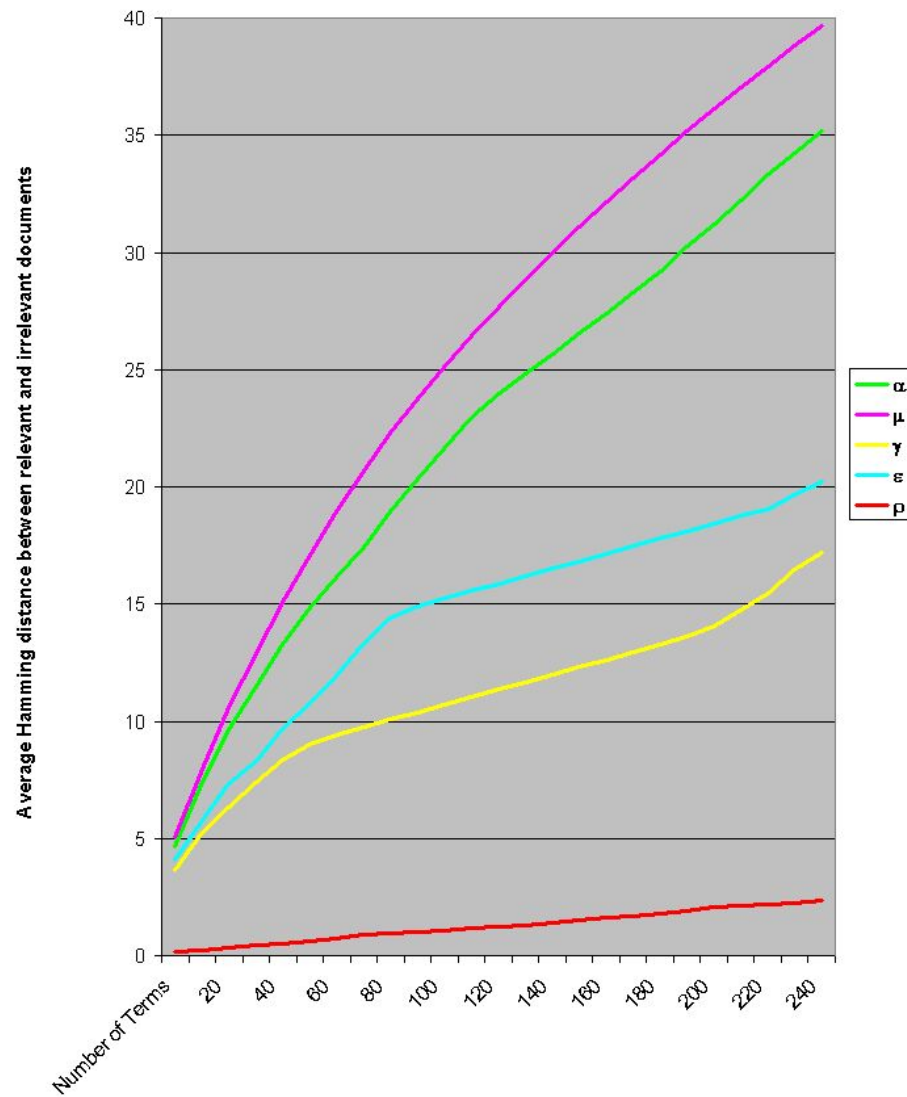
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Entropy: $\epsilon(t) = \epsilon(a(t), b(t)) = \dots$

...

Separation Results



Validation: TREC 2002 Batch Filtering

Approach

Choose $|T| = 50$ top words by majority vote of 5 best measures.

Retrieve test document d if $\tau < \sum_{t \in d \cap T} \log \left(\frac{a(t)+0.5}{|\mathbb{R}|+1} / \frac{b(t)+0.5}{|\mathbb{I}|+1} \right)$

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Results

On 100 topics our TU11 score was

16 times below median,

26 times equal to the median and

58 times above median (21 times equal to the maximum).

Our system ranked 6th out of the 15 competing systems.

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- Concept generation ...