

# Specialist English: Assignment 3

Rebecca J. Stones  
rebecca.stones82@nbj1.nankai.edu.cn

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This third assignment (worth 5% of the final mark) continues exploring how the English language interacts with mathematics and LaTeX, and also looks at punctuation.

I'll scale the marks on this assignment according to  $m \mapsto \min(m, 10)$  for Master's students and  $m \mapsto \lceil m/1.3 \rceil$  for Ph.D. students.

My marking will be affected by (a) your English writing, (b) your LaTeX typesetting, (c) your mathematical presentation, and (d) your understanding of the underlying computer science. Basically, I will “peer review” your assignments.

**Problem 1** Identify the punctuation-related error(s) in the following three snippets:

[3 marks]

To support runs of large-scale parallel applications in which a shared file system abstraction is used, Zhang et. al. [15] developed a scalable MTC data management system to efficiently handle data movement.

(Source: Yin, Zhang, Wang, Feng, *SDAFT: A Novel Scalable Data Access Framework for Parallel BLAST*, Proc. DISCS, 2013. [dl.acm.org/citation.cfm?id=2534647](http://dl.acm.org/citation.cfm?id=2534647))

To overcome existing problems of current image search engines. A natural solution is to enable users to flexibly express their intentions by providing them a pen and a drawing panel.

(Source: Xiao, Wang, Zhang, Zhang, *IdeaPanel: A Large Scale Interactive Sketch-based Image Search System*, Proc. ICMR, 2015. [dl.acm.org/citation.cfm?id=2534647](http://dl.acm.org/citation.cfm?id=2534647))

The CCM model[9] assumes that user starts the examination of the search results from the top ranked document.

(Source: Zhang, Wang, Wang, Chen, Zhang, Hu, Zhang, *Learning Click Models via Probit Bayesian Inference*, Proc. CIKM, 2010. [dl.acm.org/citation.cfm?id=2534647](http://dl.acm.org/citation.cfm?id=2534647))

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**Problem 2** The following snippet has several problems, such as:

1. “X” is not a multiplication symbol, it’s the letter “X”,
2. the dashes have the wrong length,
3. “for edge relation” is ungrammatical,
4. “one copy of edges” is ungrammatical,
5. inconsistent rounding of decimals,
6. saying both “edges” and “edge relation” is inconsistent, and
7. the last sentence is a sentence fragment; it should be connected to the previous sentence.

The storage for edges in X-Stream is 2.1X-4.5X that of storage in PathGraph. However, the storage of GraphChi for edge relation is 0.72X-1.51X that of PathGraph’s storage. This is because GraphChi stores one copy of edges.

(Source: Wen, Zhang, Xie, Jin, Liu, Lee, *Fast Iterative Graph Computation: A Path Centric Approach*, in High Performance Computing, Networking, Storage and Analysis, 2014. [ieeexplore.ieee.org/document/7013020/](https://ieeexplore.ieee.org/document/7013020/))

Rewrite and optimize the above snippet; points 1 to 7 above need to be resolved.

[5 marks]

**Problem 3** The following snippet also has several problems:

Represented by

$$\{(w_i, \text{FID}_{w_i})\}_{w_i \in W} \quad (1)$$

it is a normal per-keyword index that contains  $|W|$  keyword fileIDs pairs such as  $(w_i, \text{FID}_{w_i})$ , where  $w_i$  is an arbitrary keyword and  $\text{FID}_{w_i}$  is the identifier set of files that contain  $w$ .

(Source: Zhang, Zhang, Yan, Zhang, *A New Secure Index Supporting Efficient Index Updating and Similarity Search on Clouds*, Security in Cloud Computing, 2016. [dl.acm.org/citation.cfm?doid=2898445.2898451](https://dl.acm.org/citation.cfm?doid=2898445.2898451))

Rewrite (correct and optimize) this sentence, and explain your changes.

[5 marks]

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PS. If you suspect I’m picking on Chinese authors, that’s because I am! My experience is that native Chinese speakers make different English-language mistakes to other nationalities.