

Specialist English: Assignment 5 (solutions)

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Here's my solutions; your solutions needn't be identical.

Problem 1 *Correct the grammar surrounding the highlighted nouns or noun phrases ...*

- “Internet of Things” is a definite noun phrase¹. If we ask *Which Internet of Things?* the answer will be “there is only one”. In this situation, we must write “the Internet of Things”. Both of these are grammatically correct:

A Review **on** Trust Evaluation for **the** Internet of Things

A Review **of** Trust Evaluation for **the** Internet of Things

- “Study” is a countable noun (we can have “one study”, “two studies”, etc.). So we need to write one of “a study”, “the study”, “studies”, etc., whichever is appropriate. In this case, “a study” is the correct choice:

A Study on Simulation Credibility Metrics

A Study of Simulation Credibility Metrics

Or we could just get rid of the problem entirely with:

Simulation Credibility Metrics

- “Emerging Memristor” is a countable noun phrase, so like above, we need to use “a”, “the”, the “-s” suffix, or something else. In this case, these are several grammatically correct alternatives (with slightly different meanings):

Impact of Process Variations on **Emerging Memristors**

Here the wording suggests we're studying all or several types of “emerging memristor”. (This is likely the best choice.)

Impact of Process Variations on **an Emerging Memristor**

¹https://en.wikipedia.org/wiki/Internet_of_things

Here the wording suggests we're studying a specific type of emerging memristor. Perhaps we're able to name the precise model of "emerging memristor" that we study.

Impact of Process Variations on **the Emerging Memristor**

Here the wording suggests we're studying the concept (or idea) of an "emerging memristor". It sounds more theoretical.

Problem 2 *Improve these titles by using compound adjectives ...*

1. The original title is:

K-way Min-Max Cut for Image Clustering and Junk Images Filtering from Google Images

In this case, "junk images filtering" is ungrammatical, it should be "junk image filtering". Afterwards, "junk image filtering" means the "image filtering" is "junk" (or synonymously "very poor" or "rubbish"). Consequently, the authors inadvertently call their own work "junk" in the title of their paper.

K-way Min-Max Cut for Image Clustering and **Junk-Image** Filtering from Google Images

We need to write "Junk-Image" instead of "Junk-Images"—it's an adjective so shouldn't be plural. (There's a small number of exceptions to this rule.)

2. The original title is:

Design Closure Driven Delay Relaxation Based on Convex Cost Network Flow

Here, "convex" inaccurately describes "cost network flow".

Design Closure Driven Delay Relaxation Based on **Convex-Cost** Network Flow

Now "convex cost" now describes "network flow".

If we look at the paper, we see that they study "design closure". Thus, this is correct:

Design-Closure-driven Delay Relaxation Based on **Convex-Cost** Network Flow

I consider the above even better (but others might reasonably argue that the usage of hyphens is excessive). Using a lowercase "d" further emphasizes that "design" and "closure" go together.

However, this is incorrect:

Design Closure-Driven Delay Relaxation Based on Convex-Cost Network Flow

This is because the paper does not have "closure-driven delay relaxation", but rather "design closure" is what's driving the "delay relaxation".

Other comments:

- Some students wrote "K-way-Min-Max Cut"; it's not grammatically incorrect, but it doesn't improve anything either. I think it makes it harder to read (since "K-way" describes the "Min-Max Cut").
- It's unsurprising that we'd need to actually look at the paper to write a technically correct title.

Problem 3 Rewrite this title to remove any unnecessary words, and correct the grammar and capitalization (using title case) ...

Research on GPU-based Computation method for Line-Of-Sight Queries

Unnecessary words: “research on” and “method”, however a word meaning “computation” is needed, but “computation” is not the best choice of word (better is “processing”). The word “method” is not capitalized, when it should be. The word “method” is countable, so it should be “a method”.

GPU Line-of-Sight Query Processing

GPU-based Line-of-Sight Query Processing

Any of these are okay: “Line-Of-Sight”, “Line-of-Sight”, and “Line-of-sight”. But I think “Line-of-Sight” is the best choice.

I gave these full marks:

GPU-based Computation for Line-Of-Sight Queries

A GPU-based Method for Line-of-Sight Queries

Here, the word “method”, although not the best choice, plays the role of the word “computation” (which is also not the best choice).

This doesn’t work:

GPU-based Line-Of-Sight Queries

Here, the problem is that “queries” are not GPU-based (but their approach to query processing is GPU-based).

I definitely took marks off for:

- Leaving the word “research” in the title of a research paper.
- Writing “a research” or “an [adjective] research”.

The word “research” is uncountable. This is the same reason we don’t write “researches” to mean the plural of “research”—it has no plural. This is a very common grammar error.

... research should always be used as a mass noun. Some writers attempt to force research to take a plural form (researches); however, this usage is incredibly rare, and it will almost certainly trouble a reviewer.

— Jernigan, American Journal Experts².

Judging from the English StackExchange site³, it was considered countable maybe 100 years ago. We can see this trend in Figure 1, which plots the Google Ngram results for some relevant phrases. Most native-English speakers will not be aware of this archaic usage, and (like me) simply consider it a grammar error.

Problem 4 Correct the four grammar errors indicated in bold in the following title.

The Stability Study of **Biped Robot** Based on **GA** and **Neural Network**

²<http://www.aje.com/en/arc/editing-tip-singular-and-plural-forms-scientific-writing/>

³<https://english.stackexchange.com/q/286603> and <https://english.stackexchange.com/q/296286>

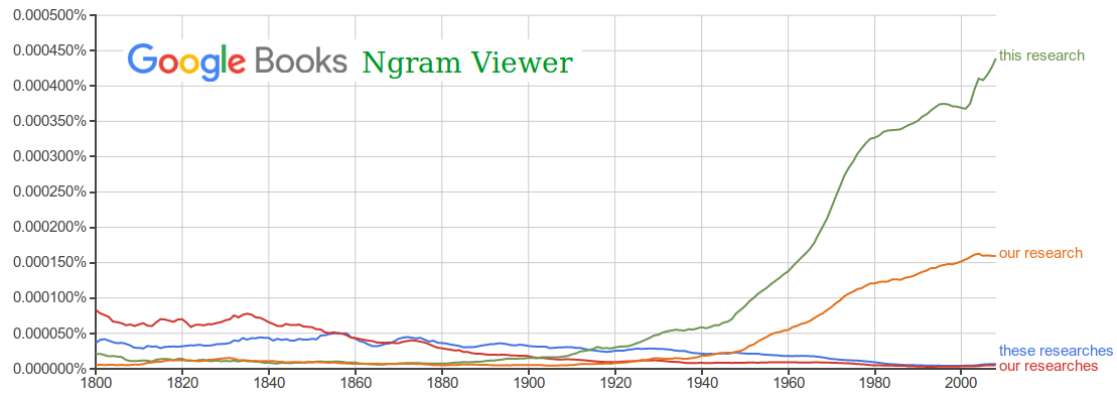


Figure 1: Google Ngram results for “this research”, “our research”, “these researches”, and “our researches”.

What I was expecting:

A Stability Study of **Biped Robots** Based on **the Genetic Algorithm** and **Neural Networks**

There was many alternatives:

- “A Biped Robot” and “the Biped Robot” are also grammatically correct but have slightly different meanings (like with “Emerging Memristors”). Both “biped” and “bipedal” are acceptable adjectives, and convey the same meaning.
- My understanding is that “the Genetic Algorithm” and “a genetic algorithm” (or “genetic algorithms”) are both correct. As a proper noun, it’s unorthodox to describe several of them, e.g. “a Rebecca Stones” (despite their being other people named Rebecca Stones). So we could say and “the Genetic Algorithm”. However, when using title case, it’s hard to tell them apart.
- “A Neural Network” is also okay, although it means something slightly different: that the paper studies a particular type of neural network.

Problem 5 *Correct the following title which makes the common mistake of writing “the number of defects” as “defect number”. (To see how this is wrong, compare it to “number of phones” vs. “phone number”).*

Predicting Defect Numbers Based on Defect State Transition Models

This question wasn’t meant to be difficult:

Predicting **The Number of Defects** Based on Defect State Transition Models

I just want to make sure you’re all aware of this common error. To illustrate, suppose this is the case:

- X is defect 1,
- Y is defect 2, and
- Z is defect 3.

(And there’s no other defects.) Then the number of defects is 3, and Y’s defect number is 2. They have different meanings.