

Writing for Computer Science

A decorative graphic consisting of several horizontal lines in shades of blue and white, extending across the width of the slide below the title.

Advice for CS College Students

- Learn how to write before graduating.
- Learn C before graduating.
- Learn microeconomics before graduating.
- Don't blow off non-CS classes just because they're boring.
- Take programming-intensive courses.
- Stop worrying about all the jobs going to India.
- No matter what you do, get a good summer internship.

Writing in CS

- You must be able to communicate effectively to succeed in Computer Science
- You have to be able to express your ideas to your customers and manager
- Clarity and organization are vital when you write for a technical field

Audience

- Who are your readers?
- If someone dislikes anything you have written, remember that it is the readers you need to please, not yourself
- Sound familiar?

Spelling & Grammar

Spelling and Grammar

- “When I first started up my friends Playstation 3...”

Spelling and Grammar

- “I currently use a combination bike lock to lock my bike into a convenient bike rack”

Spelling and Grammar

- “The main interface was made to easily understand finding where buttons were”

Spelling and Grammar

- “Another major thing I found with this website that they don’t fix the bugs in their UI as soon as they get them”

Spelling and Grammar

- “If the user is lost in menus prolonging their usage of the application...”

Spelling and Grammar

- “The jobs list page was very simple with a list all the jobs”

Spelling and Grammar

- “When I tried clicking on an item that I wanted to open, it flew off screen momentarily”

Spelling and Grammar

- “If the middle button isn’t pressed, after a minute the alarm is done going off”

Spelling and Grammar

- “The fact that overwhelmingly the worst part of riding my bike is preparing to ride it is obvious in hindsight, but it didn’t occur to me until I sat down and thought about it.”

Spelling and Grammar

- “... I noticed many of the tacet heuristics that exist in the HCI world, ...”

Spelling and Grammar

- “I was unfamiliar with the settings screen so it took me by surprise and I had to learn how use it whereas if it had been constant with other applications it would have been intuitive”

Economy

- Text should be taut
- Waffle is deadwood that readers must cut away before they can get to the meaning of the text
- Be careful not to condense text too much. Your writing must be understood

Economy

- “The first issue that the application creates is noticeable immediately upon loading. It has a similar interface to many other Xbox applications, which makes it look normal on the screen. Despite looking friendly, it suffers from the same problem that all Xbox applications do, in that it lacks the ability to display a large amount of information. Scrolling through the selections of movies and TV shows is a clunky operation, with only one category or list of movies/TV shows being displayed at a time. In addition, there is a noticeable lag when switching between categories, which makes the app seem slow. This means that I end up waiting on the application nearly every time I take action.”

Tone

Tone

- Science writing should be objective and accurate
- Many elements that give literature its strength – nuance, ambiguity, metaphor, sensuality – are inappropriate for technical work
- Direct, simple style is appropriate
- Don't use turgid, convoluted language

Tone

- Have one idea per sentence or paragraph, one topic per section

One topic per paragraph

- “There is a longer learning process using this website. There are menus and submenus, and in general there are a lot of abbreviations and stock market terms that you need to have learned beforehand. The time to learn is fairly long. After 45 minutes of using the website I finally found there is a secret link right below the name of the company I was looking at. It gave me to a link other companies that sell similar items or that have similar services. The reason for why it was difficult for me to find was location and it didn’t stand out because so many other words are highlighted in blue also. Another think I found was if I highlighted the search bar then push the right arrow button, the words that were previously in the search bar remain there. This made my searches incorrect, as a random word would be connected to to my search query. I had to go all the way up to the bar and delete the words that were supposed to go away on entering that bar.”

Tone

- Use short sentences with simple structure
- “The back button on browser did not work because I found that this website does not allow you to use your browser buttons to move through their website and also does not accept “enter” as a form submitting.”

Tone

- Slang (“home run”), values (“cool”), analogies, (“like turning left from the right lane”), and events (“the Northeastern power outage”) may be meaningless to people in other countries
- “This program is also very heavy on your computer if it’s a lower-end system”

Tone

- Avoid buzzwords, clichés, and slang
- “While the Wii U may be aesthetically pleasing, it is like putting lipstick on a pig. While it may look nice, it is still a pig and useless.”

Tone

- Use direct statements and expressions involving “we” or “I” – that is, the active voice – to make reading more pleasant

Tone

- Don't be tempted to imitate the style of *popular* science writing

Examples

Examples

- Use an example whenever it adds clarification
- Each example should be an illustration of just one concept

Style

Exact

- Make certain that every word means exactly what you wanted to express
- Avoid vague expressions that are typical for spoken language
- Make clear what the pronouns refer to. The reader shouldn't have to search the previous text to determine their meaning

It, it, it, it, it, it, it, it, it, it, and it

- “A friend online was telling me to hit some button so it would work, but I couldn’t find it where he said it was, and there was no options to turn on the webcam either”
- “I had no idea what mount even meant so I just went ahead and did it anyway because it told me to.”

Also they

- “I was sitting at a red light while attempting to do this but it took three attempts to select the right icon because they were small and close together.”

Ambiguity

- It is often hard to detect ambiguity in your own text because you know what is intended
- “I’ve never seen a single error show up, but it has crashed a few times.”

Padding

- Padding is the use of pedantic phrases such as “the fact that” or “in general”
 - Irritating
- “of course”
 - Patronizing
 - Insulting
- “in any case”, “it is perhaps the case”, “it is frequently the case that ...”
 - Use “often” instead

Padding

- Unnecessary introduction of quantities, or the concept of quantities
- “A number of”
 - “several”
- “A large number of”
 - “many”
- “I’ve had tons of issues ...”

Plural Agreement

- “There’s no help articles on the program that I can find”

Apostrophes

- “Something that I learned from the Wii U is that you don’t want to distract from what the users purpose is.”

Overuse of Words

- Ada was used for this project the underlying operating system is implemented in Ada
- Ada was used for this project because it is the language used for implementation of the underlying operating system

You, me, I, user

- “While this seems like a good idea when first described to you, I found it to simply frustrate me”
- “The guide presents you with a list of all of the channels programed for the user’s TV”

You, me, I, user

- “Also note that there is no go button, meaning that you must press enter while having the address bar selected in order to go to a webpage. We can turn on However, I notice that my”

Opening Paragraph

- The opening paragraph can set the reader's attitude to the whole paper, so begin well.
- “So, I recently installed OpenSUSE with KDE as the environment as a secondary boot on my desktop. I was browsing through the applications and saw Konqueror and heard a little bit about it and decided it would be good to try out. Essentially, Konqueror is what one could use as a web browser for a Gnu/Linux system running KDE”

Misused Words

- Use “that” in preference to “which”; use “which” only when it cannot be replaced by “that”
 - There is one method which is acceptable
 - There is one method that is acceptable
 - There are three options, of which one is tractable

Misused Words

- The word “that” is often underused. Use of “that” can make a sentence seem stilted, but its absence can make a sentence unclear
 - It is true the result is hard to generalize
 - It is true that the result is hard to generalize

Misused Words

- Less, fewer: one is for continuous quantities, other for discrete quantities
- Affect, effect: one is the consequence, the other influences
- Assume, presume:
 - Assume: for now, take as being true
 - Presume: take for granted
- May, might, can:
 - Users can access this facility, but may not wish to do so