

To: Prof. Brad Stiles

From: Jack Pearce

Subject: Software Development Disciplinary Research Memo

Date: September 7, 2023

This memo is to inform you of what my research will entail and how I plan to go about my research. It will also give you background information of my discipline and what is utilized within it.

Computer scientists generally use a citation format called “ACM(Association for Computing Machinery)” for academic writing. Example of ACM:

[1] Marina Chernish. 2022. What software development consulting is & why you need it — clockwise software. Clockwise.software. Retrieved September 5, 2023 from <https://clockwise.software/blog/software-development-consulting/>

Primary research is the collection of original data directly from the source or the participants. Primary research in software development would be code or posts that are directly from a person or their situation. Secondary research is the analysis of existing data from previously published sources. Secondary research in software development would be passing along information without actually having done it yourself.

Prior to any research, I had only really seen tutorials or documentation that may help you learn. I had not knowingly seen any academic writings related to computer science in general. There does not seem to be many academic writings for those who have not been in the business for a long time. It is all very high level and scholarly (a lot of it goes over my head). Most of the information is digital these days, but older generations learned about computer science and software development through books.

Here is a list of commonly used websites for software developers:

- GitHub (<https://github.com/>)– Where developers can collaborate, update projects, provide information about projects, or tutorials.
- Stack Exchange(<https://stackexchange.com/>) – Not specifically a software development site but does have a software development subcategory. Used for communication between developers on things such as questions and answers and recommendations.
- Stack Overflow(<https://stackoverflow.com/>) – primarily for questions and answers on topics relating to software development.
- Geekforgeeks(<https://www.geeksforgeeks.org/>) – Tutorials, definitions and documentation on all things coding
- Other various documentation websites used for specific programming languages or packages.

There are several types of specialized language and terminology used in programming. There are quite literally programming languages which are each practically an entire language in themselves. There are several terms for the same thing depending on what you do in software development. If you program in Python, you call a specific thing in programming a function, but if you program in Java, you call it a method. They mean the same thing, but it is differently named for some reason.

In software development, it is a *must* to know how to properly name your variables in your code if a solution is wanted to a problem that is occurring. Otherwise, if on a site such as Stack Overflow, the community will not answer a question unless variables are named properly. One also should know their terminology and use it properly to avoid being talked down to. It may not always be the case that someone will be criticized for the phrasing of their question or syntax of their code, nevertheless it is best to ensure one has checked those things before creating a post.

Computers scientists in general are very particular people. If you do not conform to the community rules and guidelines (spoken and unspoken) that are set, you will not be welcomed with open arms. Instead, you will likely be ignored or criticized. I hope this gives you a better understanding or picture of what a software developer may engage with daily.