

The Techie's Weblogs: An Examination of Blogs used by Computer Scientists

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UWP 101V: English Composition

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April 26, 2024

Abstract

Blogging as a genre has its roots with early computer scientists, and has since evolved to fulfill some purposes for this community of computer scientists. The goal of this study is to examine what purposes this genre now fills, and what goals it achieves for the community. I examine three blogs written by professionals and academics in this community, and compile how these blogs achieve the goals of the community through their tone and content. This study finds that blogging serves four general purposes: it allows for interaction, it is an easy to find resource for technical information, it gives useful advice and information, and it allows for writers to discuss the impacts of computer science on a broader scale. Perhaps most relevant and interesting for this discourse community is how blogs are the dominant resource for technical information. Some reasons for this may be how easy they are to read and find. Further research into why they show up as the first result of a search query may be helpful.

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Introduction

Blogs originate from Weblogs, which were used by early computer scientists as a way of sharing information and tips on the internet (Reid, 2011, p. 304). According to Reid (2011), blogs are a form of writing on the web that focus on specific interests that the author may have, and may cover a broad range of topics (p.304). Blogs have since developed into their own genre. Genre is defined as broad guidelines and rules for a piece of work that come from previous precedents of similar work (Dirk, 2010, p. 259). For members belonging to the computer science community (where blogs originated from), blogs as a genre started to serve a broader range of purposes, which is what this research paper explores. This community of software engineers can be described as a discourse community, a term that Schmidt and Vande Kopple (1993) define as a group of people who try to develop a meaning and perception on society and the world; each group has their own values and goals. With these three concepts in mind, I ask a question on what purpose blogging, which is a genre that originated from the discourse community of software developers, serves for the writers and readers that belong to this discourse community.

Methods

I selected four blogs for the purposes of answering the research question of why blogs are used by Computer Scientists. The first is written by Daniel Lemure (2024), a professor and contributor of open source software. He uses his blog to introduce coding algorithms. The second is written by Ryan Donovan (2024), writing advice for computer scientists as a staff for StackOverflow. The third is a blog by members of the Google AI Research team (2024), and they share their research there. The fourth is an article on GeeksForGeeks (2024), a weblog site that contains information on computer science concepts. Three of these blog sites were chosen

because of their connection to well known companies and websites. I chose the final article by Daniel Lemure because I found the topics on algorithms relevant to most computer scientists, both academic and professional. I examined the backgrounds of the writer's of the blogs to determine their credibility, and determined that these blogs are written by members across a wide spectrum of the community. After choosing these blog sites, I examined some of their recent blog posts. I read through the posts and answered questions regarding the structure, content, tone, and design of the post. These questions relate this genre of blogging to the discourse community. These questions also helped reveal some nuances and aspects of the blog. Analyzing the similarities, differences, and seeming goals, I compiled the reasons for how the blogs contribute to the discourse community.

Results

The results of this study are that the Software Engineering community uses blogging for four different purposes. The first way that the blogging genre is used is that it creates a space for interaction between different members across the community, like asking questions and giving advice and help. The second is that blogs are easy to find sources of information on the internet, whom anyone could easily find. The third reason blogs are used is that they contribute to the community's goal of knowledge sharing, as they contain information, advice, and skills that all programmers can implement. The fourth thing is that blogs allow for computer scientists to question and discuss how software is impacting the world and question how they can improve society using software development.

Discussion

A Space for Semi Formal Interaction

An important aspect to learning is interacting with others in the same profession. Blogs give the space for any individual in the community to ask a blog author questions, and for the blog author to respond and give advice or feedback. Daniel Lemure's (2024) blog especially highlights this point, starting off a post by explicitly stating that a reader asked for help in developing an algorithm to calculate a square root. This highlights the ability of interaction that blogs give. Daniel Lemure (2024) then uses the blog post to build up on a related topic to this question. The question a user asked gave the author of the blog something to think and write about, and the reader gets his answer and more. Blogs are written (usually) by one author, and the reader knows how credible a person that author is without needing to dig too deep into their background. Then the semi-formalness and ease of commenting makes it simple to ask a question. Ryan Donovan (2024) has a blog where a reader (ZeroOrigin, 2024) directly asks the author "will RUST replace Java and C Programming Languages going forward?" The ability to ask a question with such ease to the blog writers, who may be an expert in the field, helps discussions happen for the computer science community. The aspect of interaction is important because the entire purpose of a discourse community is to discuss, interpret, and find meaning (Schmidt & Vande Kopple, 1993).

Easy and Consistent to Discover and Use

Another way the Computer Science discourse community uses blogs is as an easy to find resource that computer scientists would regularly look for and use. The people in this discourse community usually turn to the internet when coding, looking for resources about computer concepts. Out of many different resources (wikis, academic articles, lecture slides, APIs), blogs have become the most dominant. This itself can be attributed to a few factors. The first and most dominant reason is that blogs are one of the first results that show up when a software developer

is looking for a specific topic related to computers. For example, when searching for a topic like “merge sort” (an algorithm), the first result is to a GeeksforGeeks page about the topic (a blog site) (GeeksForGeeks, 2024). All it takes is a simple search on the internet, and the resource shows up. The second reason for their dominance is because of the way information is presented. The writing is semi-formal, code snippets are interwoven, and explanations are given where needed. This makes it easy for a programmer to find exactly what they are looking for. We see this format specifically in Daniel Lemure’s (2024) blog post. He goes step by step through the algorithm, developing it from the ground up. The information is presented neatly. In some ways, blog posts are like excerpts from a textbook, but much easier to access and use. Now, people from the discourse community expect these types of things from the genre of blogs, and will keep returning.

Useful Source of Knowledge (Sharing)

This discourse community also uses blogs to let readers, programmers from any background or expertise level, to expand their knowledge and share their experiences. They can present interesting pieces of information, advice to new software developers, and new research or algorithms. This usage of blogging lines up with one of the major values of computer science: spoken clearly by Ryan Donovan (2024), “computer science and software development have developed a culture of knowledge-sharing.” The simplest usage of blogging is to share knowledge. As Dirk (2010) explains, blogging started out as a way for “techies” to share information about the web. Sharing knowledge and improving software are important aspects of being a part of the Software Engineering discourse community. This is the main purpose of these blogs: In Ryan Donovan’s (2024) blog post, he gives advice on how to manage memory safely. In Daniel Lemure’s (2024) blog, he is directly explaining an algorithm for computing a square

root. In the Google AI blog (2024), the authors are directly sharing their methods and results of their research. And the GeeksForGeeks (2024) site has countless articles about all different types of algorithms and data structures and programming language syntaxes. All of these blogs have in common the fact that their main purpose is to share the knowledge and expertise that the community has gained and developed. Sharing software knowledge directly helps the community's goal of improving software, as improving the knowledge of the general community enables them to write better software.

Broadening Horizons Beyond Just Software

Finally, the Computer Science discourse community uses blogs as a place to discuss the impact and uses of software on a wider, societal scale. This expands the discourse community from beyond finding meaning in just computers and general knowledge to a broader societal impact. The purpose of the profession is to write code, but the reason behind writing the code is that the software written improves the livelihood of others (questionable now, with AI). Ryan Donovan (2024) questions "Is the programming language you use to write software a matter of national security?" He makes a connection from the realm of computer science to the United States government, from an academic one to politics. The Google AI research team (2024) presents their research in the context of healthcare, and offers ways to continue expanding AI into clinical practice. Blogs give space for these writers to talk about more than just software. Since blogs are a space where the author is free to write to their own end, blogs have become a spot where the influence of computer science on other aspects of society can be discussed (Reid, 2024, p. 309). This is important for the software development discourse community because it helps with their goal of helping society improve.

Conclusion

Blogs serve several purposes for software developers. They allow for interaction between members from across the community, are an easy to find resource, give advice and technical info, and give space to broaden the discussion to a more societal context. Many members of this community use these blogs without realizing it, and many others disregard writing in favor of technical ability. However, being part of this discourse community includes participating in the goal of improving the quality of life through the software. Knowing the importance of this genre of blogging is necessary for success. Being aware of it will let you as a reader use blogs more effectively. When you need something, you may consider reaching for blogs to help. Reading this article allows members of this discourse community to understand how blogs on the internet can improve their ability in software development. Some limitations of this study are that I focused only on popular and easy to find blogs. Since their popularity bolsters their credibility, this choice was made, but perhaps more interesting topics could be discovered if smaller, lesser known blogs written by members of this community are examined. Further research on why blogs show up as the first result when a technical topic relating to computer science is searched may be interesting.

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