

Copyright and Licensing in Computer Science

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CSCI 405-40: Principles of Cybersecurity

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October 23, 2020

Abstract

Computer science, like any other field, requires certain rules of code of conduct to protect programmers from laws and regulations. Programmers are an essential link in computer science as they are responsible for creating operating systems and software that run the computing world. As such, writing code may require the input of various developers to improve the functionality of programs or change certain features to increase the application. Notably, the sharing of code has been made easier by the internet and platforms such as GitHub and Stack Overflow. Even though the sharing of code is essential, it has to be controlled through copyright agreements, license agreements, and ethical conduct. The paper observes the aspects of copyright and license agreement in relation to computer science and obligations to programmers in terms of reuse or modification of open-source code. This paper also emphasizes the importance of maintaining a balance between intellectual rights and the rights of consumers that use and share content.

Keywords: Copyrights, ethics, computer science

Copyright in Computer Science

Copyright can be defined as a protection for intellectual work from people who might use it without the consent of the owner or creator. Copyright, therefore, grants owners and authors of explicit content control over their work for a stipulated time under copyright law. In the U.S, Copyright is a federal law under article I, section 8 of the United States constitution (Barbosa, 2016). The history of copyright goes back to 1980 when computer software was included in the list of copyrightable works by congress following the recommendation by the National Commission on New Technological Uses of Copyrighted Works (CONTU). The commission recommended that software be protected even if an author's contribution was trivial on a software recognized as his own (Oman, 2017). The Copyright Act covers a program fixed in a tangible medium of expression, but the electro-mechanical functioning is not covered. The definition of copyright protection aims to distinguish between computer programs and uncopyrightable processes.

License Agreement

Computer software and programs are made for public consumption, and while copyright protects unauthorized use, license agreement details the legal consumption of the software. In particular, software license agreements are beneficial to the developer as they permit public access to the platform while still retaining all rights of ownership. The license agreement also prevents misuse and abuse of software, leading to loss of product and a loss of profits, time, and resources required for the development. Also, software licenses limit liabilities and claims of warranty on the developer, especially on events that are beyond control. One fair license agreement is the MIT license developed by the Massachusetts Institute of Technology in the 1980s.

Notably, the license is an excellent choice for open-source licensing as it is fair to both the original developer and secondary developers. Furthermore, the MIT license is brief and easy to understand and, therefore, easy for secondary developers to come on board a project and contribute (Hasteer et al., 2016). MIT license is also readily available and can even be copy-pasted from another project, thus significantly saving on time and legal fees. However, circumstances can change in terms of software licensing, and this can impact license choice. For instance, when there is a need for collaboration with huge companies, Apache 2.0 would be my next license of choice. Apache 2.0 allows expressing patent licenses from all contributors, something large companies look at before contributing to a project.

Ethical Obligations

There are certain obligations that, as a programmer, one must observe to ensure the sustainability of computer science. The Association for Computing Machinery (ACM) details some of the ethical and professional obligations a programmer must follow when reusing code from the internet. The first obligation is to honor and respect the original coder (Gotterbarn et al., 2018). Developing new ideas like code takes a lot of effort and time; hence respect to the programmer should be accorded. Programmers are also obliged to observe the privacy of the code as well as the developer behind it. For instance, where personal information must be accessed, it must be protected from other people, and efforts should be made to protect the data from further unauthorized exposure. Notably, Internet code may contain confidential information like business strategies, research data, client contacts, and other non-public information.

Moreover, programmers should honor the confidentiality of data accessed and not disclose it to the public except under exceptional circumstances. One exceptional occasion is providing information to law enforcement agencies where the data is useful for prosecution

purposes. A programmer must also strive to provide the highest quality code, which is of more outstanding quality than the already existing code. The IEEE code of ethics I (2) calls for improving understanding of technologies (IEEE, 2020). Therefore, when reusing code, a programmer should make the code and, consequently, software or program easier to use for the end-user. Lastly, every programmer who reuses internet code must appreciate the obligations defined by ACM and IEEE and modify them depending on unique circumstances for the overall betterment of computer science.

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