With the rise of artificial intelligence, mobile Internet and the Internet of Things, the amount of data generated every day has exploded, which has also brought unlimited imagination and commercial application value to the development of society. At the same time, with the development of big data and data storage technology, more and more data can be stored online, and can be shared and exchanged on a global scale. On the one hand, this provides the possibility of collaboration between different people, companies or scientific research institutions around the world, but on the other hand, unlimited data sharing also has potential dangers: the private data or copyright data of the data source may be malicious Steal, security cannot be guaranteed. So the real question is how do we share as much data as possible to allow collaboration while maintaining control over who can access that data?

The project aims to establish a model to study this social issue: how the unlimited sharing of all forms of data can support collaboration and the impact of this sharing on the protection of data sources, which may involve data privacy, copyright and security. This project uses NetLogo, a programming modeling environment, to simulate and model this problem, so as to study the method of data sharing and how different agents collaborate through data. On this basis, some restrictions and protections are added to the model, and the impact of different degrees of restriction measures on data sharing is simulated by changing the values ​​of these variables. Finally, through the analysis and reasoning of model images and data in different situations, the model with the best experimental effect is obtained, that is, the data can be shared quickly and widely, and privacy and security have been sufficiently protected.

Keywords

Data sharing; Data collaboration; Data protection; Privacy protection; NetLogo; Modeling