Why is browser autofill a security risk?

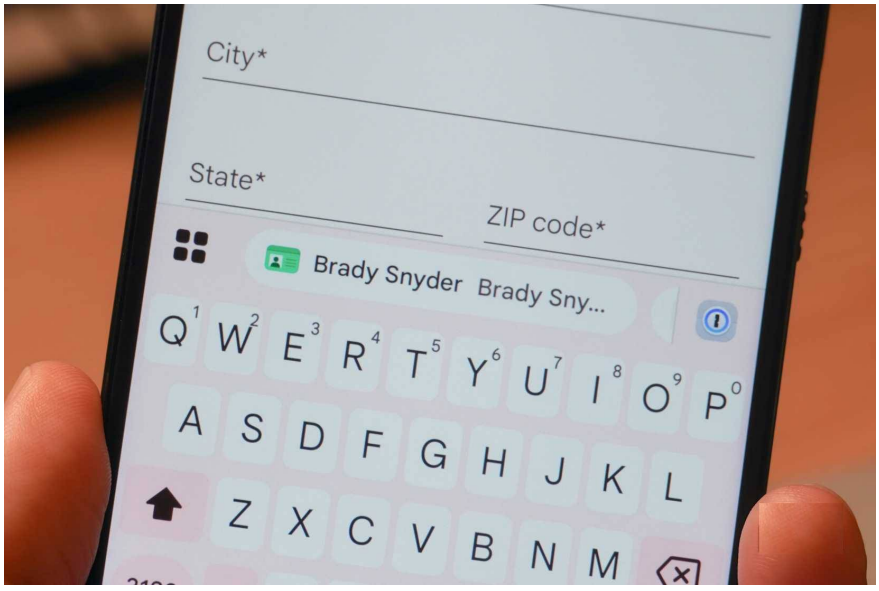
What many people don't know is that another popular browser feature, autofill, also poses similar risks.

If there's one piece of software on your phone, computer, or any other internet-connected device you need to trust, it's your browser. Your browser is your gateway to the internet , and it can learn quite a bit about you based on your browsing habits. Web browsers view the websites you visit, store their cookies , and many use analytics to personalize your experience. They can even record the time you spend on a particular website and the links you click.

Because browsers are the gateway to the internet, they can also connect you to third-party features and tools that may endanger your privacy. Untrustworthy browser extensions are notorious for security vulnerabilities, and in-browser password managers are arguably weaker than standalone options. People have used 1Password for this reason. What many don't know is that another popular browser feature, autofill, also poses similar risks.

Browser autofill is a weakness.

It stores your most important information in one place.



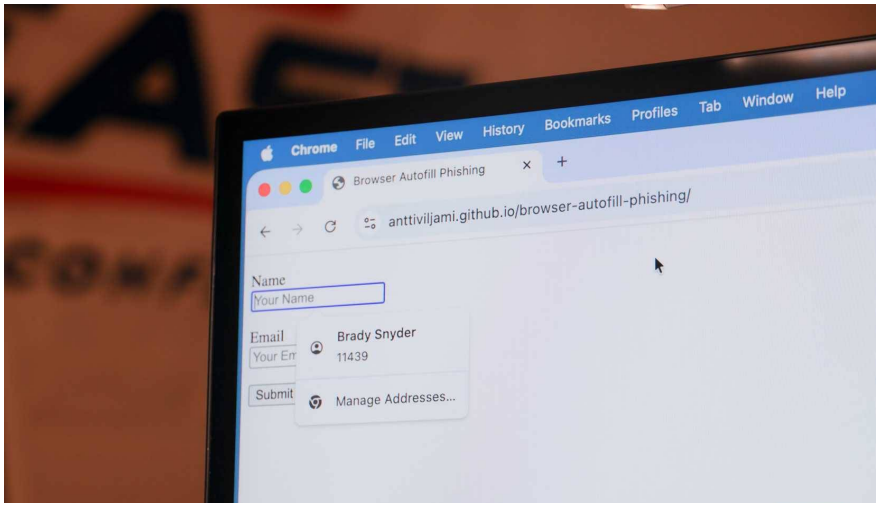
Whenever you choose to store information in a specific location, whether digital or physical, there is a risk that information could be compromised. However, the risks associated with using browser autofill or autocomplete

features are negligible. These features store important information in your browser so it can be easily accessed when filling out web forms. Common use cases include completing online purchases or booking airline tickets.

When using autofill features on web browsers, there isn't a significant risk of brute-force attacks aimed at checking data encryption. The risks in practice are much simpler. For example, if you leave your laptop unlocked and open at a coffee shop and decide to get up to use the restroom, someone could open your browser and view whatever you've saved for autofill. Similarly, if your Google account is compromised, a malicious actor could access your saved passwords and autofill information in Chrome.

You might be sharing more information than you realize.

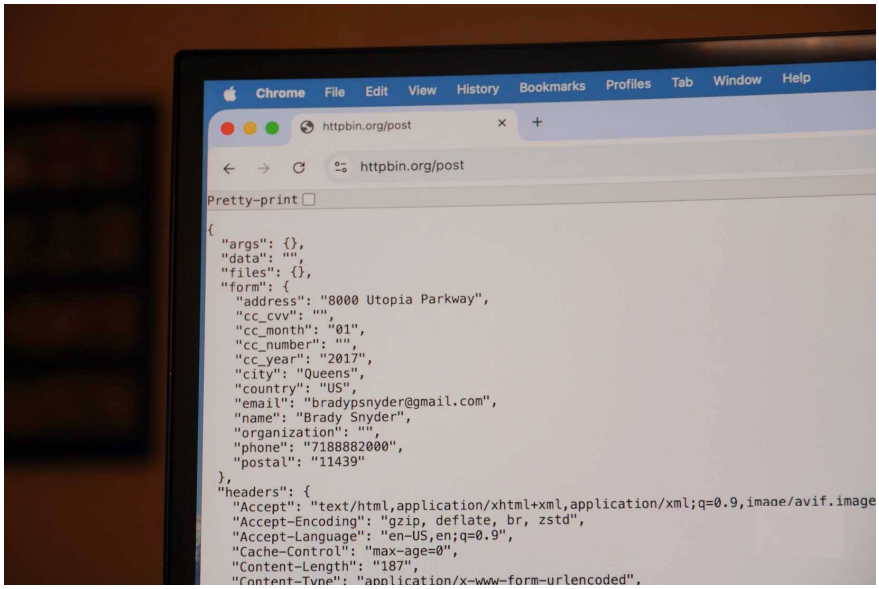
A researcher has shown how websites can trick users using autofill features.



Even if your account or device isn't compromised, you can still share more information than you intended with websites when using autofill features. A security researcher demonstrated years ago that, theoretically, websites can obtain autofill information by using fields not visible to the end user. This was explained in a GitHub project , and users can see it in action on this test site .

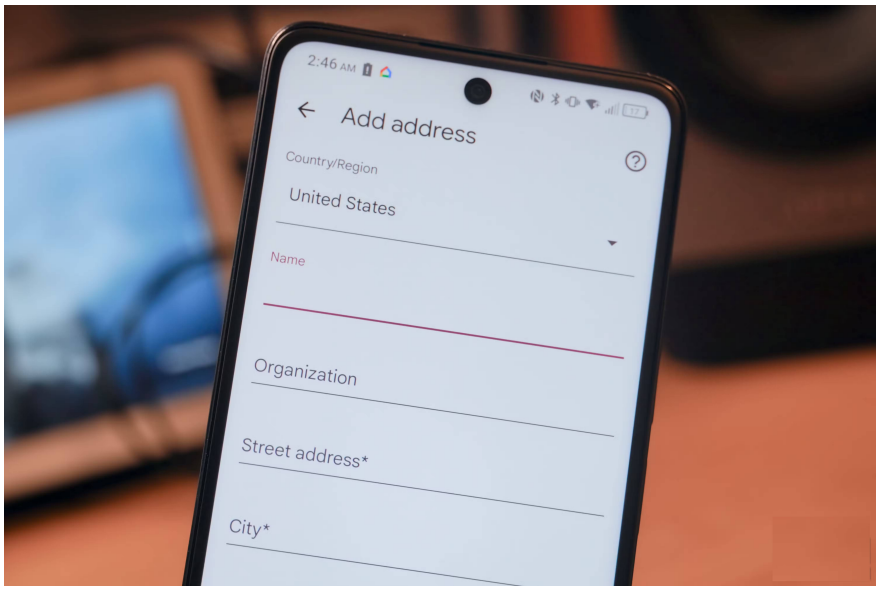
Note : It is currently unclear whether phishing attacks based on autofill features have ever been used in practice. This GitHub project is simply a demonstration of how these tactics can be used to obtain information from users.

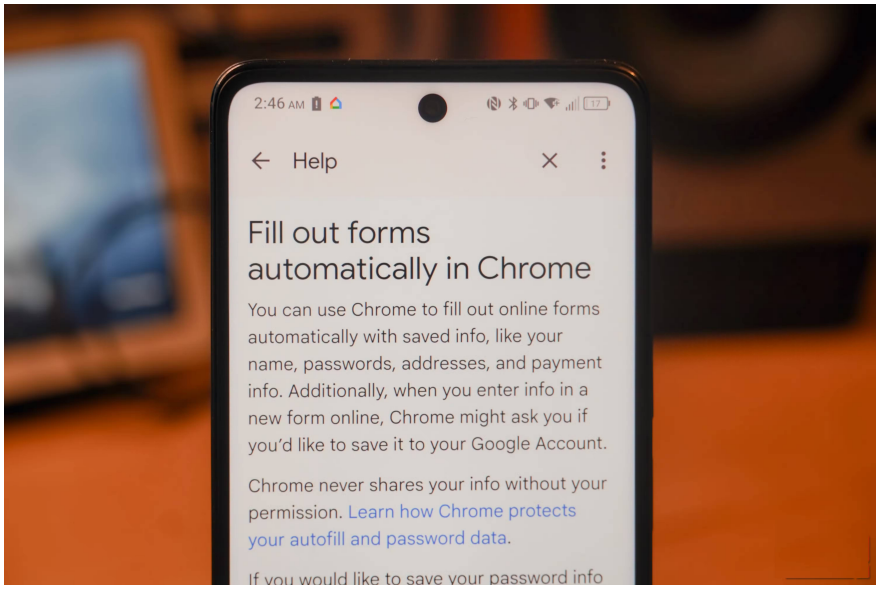
The sample website displays fields for entering a name and email address, but after using the autofill feature in Google Chrome , the website steals your saved phone number, organization, and address. Users think they are only sharing information in the displayed fields. In reality, they are providing everything in the autofill profile they selected. You can see all the stolen data in the image below:

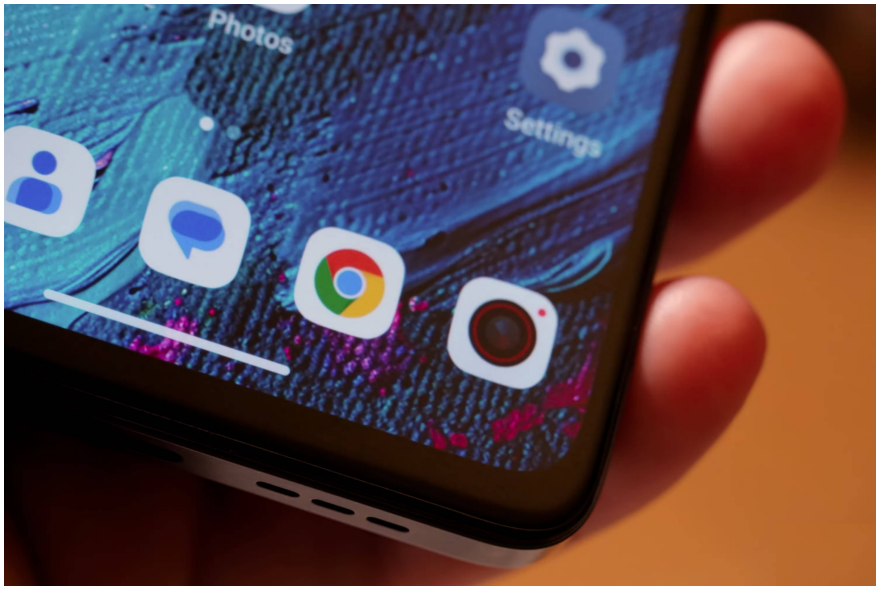


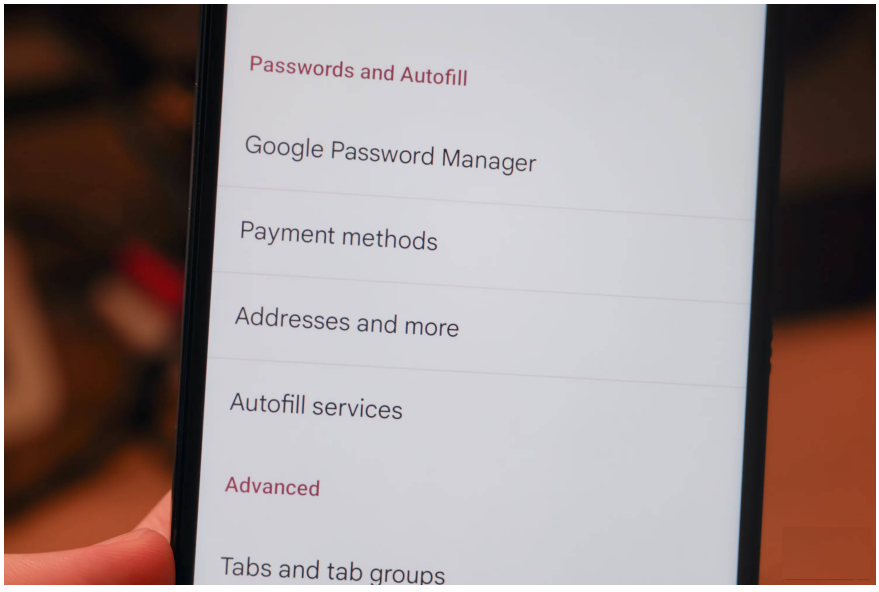
It's time to reconsider the use of autofill features.

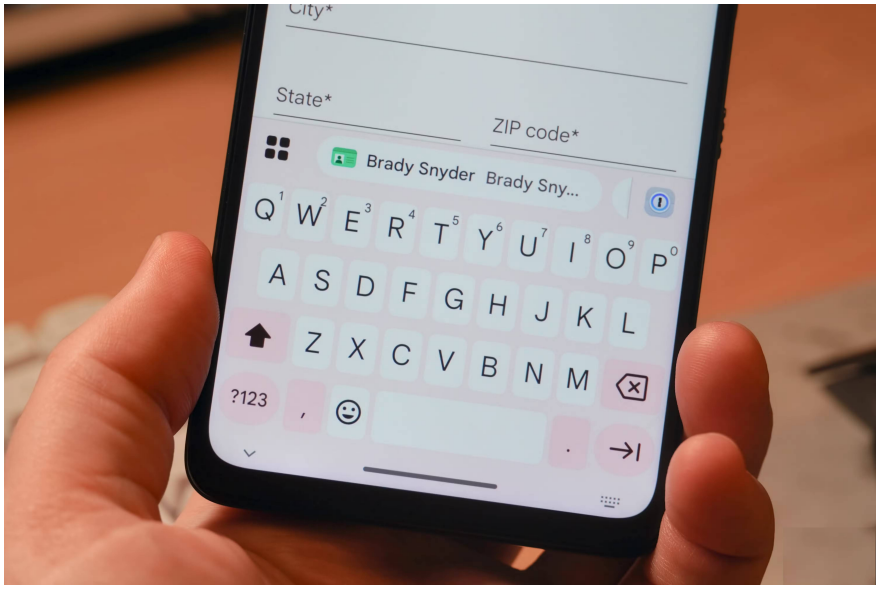
Security is almost always a trade-off between convenience.




2:46 AM
Help
Fill out forms automatically in Chrome
You can use Chrome to fill out online forms automatically with saved info, like your name, passwords, addresses, and payment info. Additionally, when you enter info in a new form online, Chrome might ask you if you'd like to save it to your Google Account.
Chrome never shares your info without your permission. Learn how Chrome protects your autofill and password data.
If you would like to save your password info


Photos
Settings


Passwords and Autofill
Google Password Manager
Payment methods
Addresses and more
Autofill services
Advanced
Tabs and tab groups



The risk associated with using autofill or autocomplete features is simple – it puts some of your most valuable data behind a single password. If you log into a browser or computer with weak or no security, someone could access your phone number, address, and sensitive information like your ID number or license plate number without entering your password.

Because many browsers maintain autofill information across multiple devices using cloud computing, the risk is higher. If that account is compromised, someone could access everything stored there. This is in stark contrast to the experience of using a secure password manager, which typically requires a master password and a setup or transfer code to access information stored on a new device.

Above all, the potential for malicious actors to use fake autofill forms to steal far more personal information than people are willing to provide is what has convinced many to stop using autofill altogether. Convenience is certainly good, but some useful features simply aren't worth the security risks.