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Geolocation: What it is, How it Works, Examples

By THE INVESTOPEDIA TEAM Updated January 25, 2021

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What Is Geolocation?

Geolocation is the ability to track a device's whereabouts using GPS, cell phone towers, WiFi access points or a combination of these. Since devices are used by individuals, geolocation uses positioning systems to track an individual's whereabouts down to latitude and longitude coordinates, or more practically, a physical address. Both mobile and desktop devices can use geolocation.

KEY TAKEAWAYS

- Geolocation refers to the use of location technologies such as GPS or IP addresses to identify and tra
electronic devices.
- Because these devices are o
geolocation is often used to
people and surveillance.
- Geolocation is used extensiv
help prevent fraud and give
services, but may also pose

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to determine country, region, state, city or postal code. Geolocation can be used to determine time zone and exact positioning coordinates, such as for tracking wildlife or cargo shipments. If you have ever shopped online and wanted to find an item in a nearby store, ordered food online after searching for a local restaurant, or sought out the closest ATM, you have used geolocation services.

Examples: Geolocation in Financial Services

Geolocation is especially useful when applied to financial services. For example:

Payments: Financial institutions with mobile apps whose users have enabled location tracking can match the location of a customer's phone with the location where the customer's payment card is being used to detect possible payment card theft. If the two locations do not match, the fraud can be detected immediately and the card shut down. If the two locations do match, the customer can avoid experiencing any service disruption that might normally happen when the payment card provider detects unusual card activity.

Insurance claims processing: An insurance claims adjusting app can use geolocation technology to substantiate a policyholder's location and minimize the number of fraudulent or exaggerated claims the insurer receives. A visual claims platform allows policyholders to work with their insurance agents using a web-based real-time communica
and determine a fair amount for th
to engage in a live video call with t
agent can take screen shots, zoom
additional details and create reco
technology creates an environme
the claims payments they receive
with regulators, resulting in better
their customers.

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Banking: Bluetooth beacons, the same type of geolocation technology that is placed throughout stores to offer users who have downloaded the store's app to receive targeted discounts while giving the store data about the consumer's shopping behavior, are providing new forms of convenience to bank customers. Geolocation is allowing bank customers to access branch ATMs with their mobile phones instead of with their ATM cards after business hours, offering convenience. Beacon technology also improves service inside smart bank branches by notifying bank employees when a customer has been waiting in a teller line too long so the customer can be directed to another bank employee at a desk who can help them.

Geolocation and Privacy Issues

With the upsides of geolocation come the downsides of safety and privacy issues. When using a device or app that allows for geolocation, it's important for consumers to understand how that data is being used and with whom it's being shared so they can protect their p
use geolocation data must make s
employees cannot access the info
don't want geolocation data that t
banking convenience, to be reuse
without their knowledge and pern

Financial services companies that
to make them aware of exactly ho
example, an app can inform a use

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with the company's policy. Users should also be informed about whether an app will allow them to delete their geolocation history after the fact if they change their mind about what they've shared. Without this trust, further efforts to implement geolocation technology could stall.

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