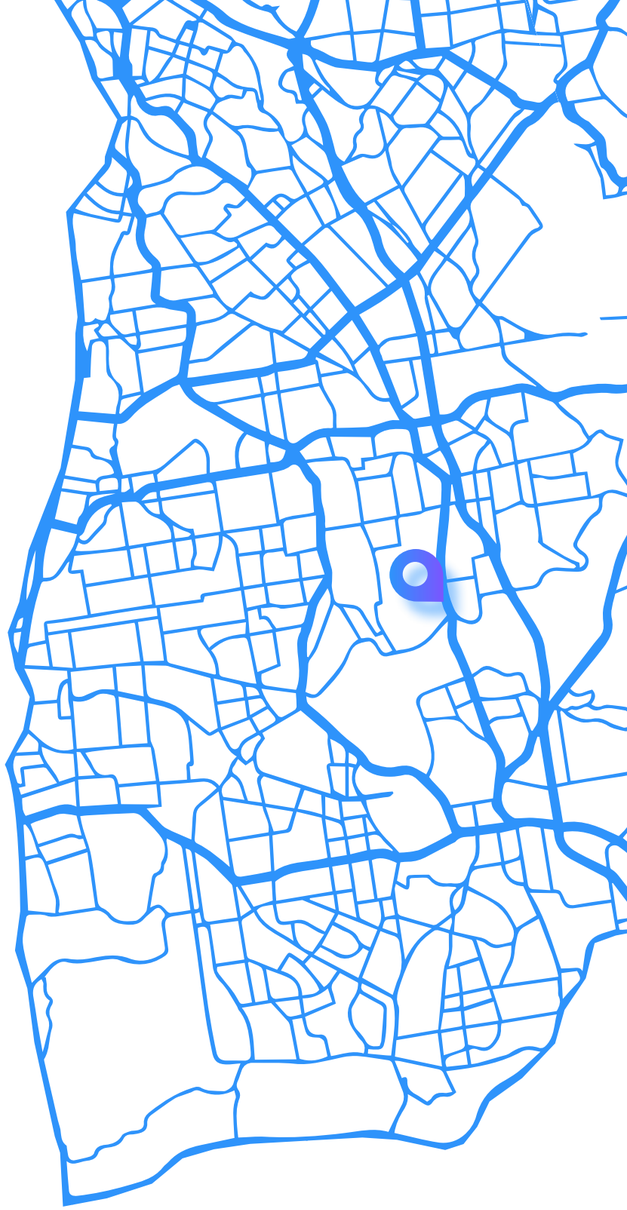
8 Questions to Ask

When Selecting A **Geocoding API**

smarty

Sneak Peek At The 8 Questions

1. Does The Geocoding API Include Address Validation?
2. Does The API Provide “As Advertised” Accuracy?
3. How Are No-Matches Handled?
4. Are Sub-Address Geocodes Offered?
5. What Are The API Capacity & Speed Capabilities?
6. Are There On-Premise & Cloud-Based Options?
7. Is Use With Third-Party Basemaps Permitted?
8. Would Additional Location Data Services Be Helpful?
    - Address Autocomplete
    - Location Biasing
    - Reverse Geocoding



Introduction

Ready to start making the most of your business's location data?

In this eBook, we'll help you understand the key features to look for in a geocoding API and what other "nice to have" benefits a provider might be able to offer you. Choosing the right geocoding service is the first step toward using location intelligence to solve business problems and make better strategic decisions.

What is location intelligence?

Location Intelligence (LI) is a methodology used to derive insights from location data in order to answer spatial questions. LI is more than simple data visualization on maps; analyzing location data is an integral part of helping businesses solve their most complex questions and challenges.

Before you can analyze the *why* between location and business event, you need to define your location parameters accurately.

That's where geocoding comes in.

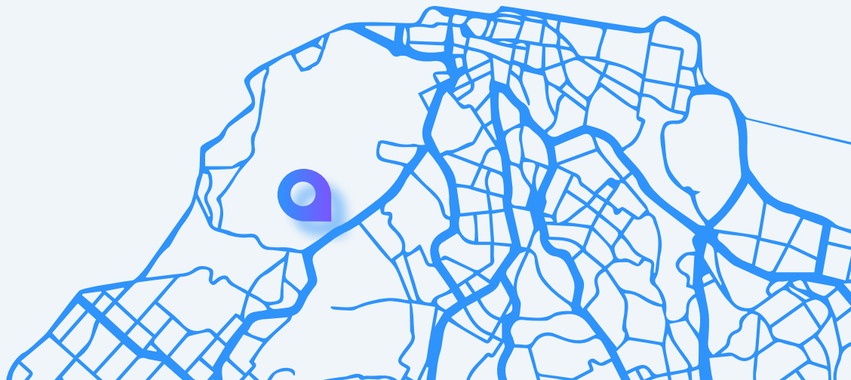
Geocoding is the process of finding the latitude and longitude coordinates that correspond to a location such as a physical address, city, subdivision, or postal code. After completing the geocoding process, geocodes can be plotted on maps for navigation, spatial analysis, risk assessment and many other use cases.

However, not all geocoding services provide the same level of accuracy, speed, and features needed for effective location intelligence.

Inaccuracies in location data can result in lost business, failed delivery expenses, decreased customer satisfaction, and missed opportunities to expand your sales. Over the long term, poor quality data increases the complexity of your data ecosystems and leads to poor decision making.

The key to getting accurate location data? A good Geocoding API.

Poor data quality destroys business value. Recent Gartner research has found that organizations believe poor data quality is responsible for an average of **$15 million** in losses per year.[1]



What truly makes a geocoding service stand out from the crowd?

1 Does The Geocoding API Include Address Validation?

What Is It?

The data you get from any geocoder is only as good as the data you put into it. That's why the first must-have feature needed in a geocoding API is built-in address validation.

Address validation is the process of verifying an address against an authoritative database to confirm if the address is a real place.

You don't want to be basing business decisions off locations that don't exist in the real world, right?

The true first step in improving your data quality is actually address validation, and a quality geocoding API will include this feature.

Why Does It Matter?

Garbage in, garbage out. 20% of addresses entered online contain errors. Unfortunately, not all geocode providers perform the critical first step of address validation. Without validation, 20% bad address data can lead to 20% bad geocodes.

Geocode providers that skip address validation inevitably provide geocodes for addresses that don't actually exist—addresses that may be miles from the actual destination.

Geocoding, with poor or no address validation, leads to:

- Wasted time & money on shipments and failed service calls
- Increased difficulty in market segmentation, accumulation, and exposure analysis
- Missed opportunities
- Mismanagement of territory boundaries
- Increased data management costs

Built-in address validation reduces bogus results.

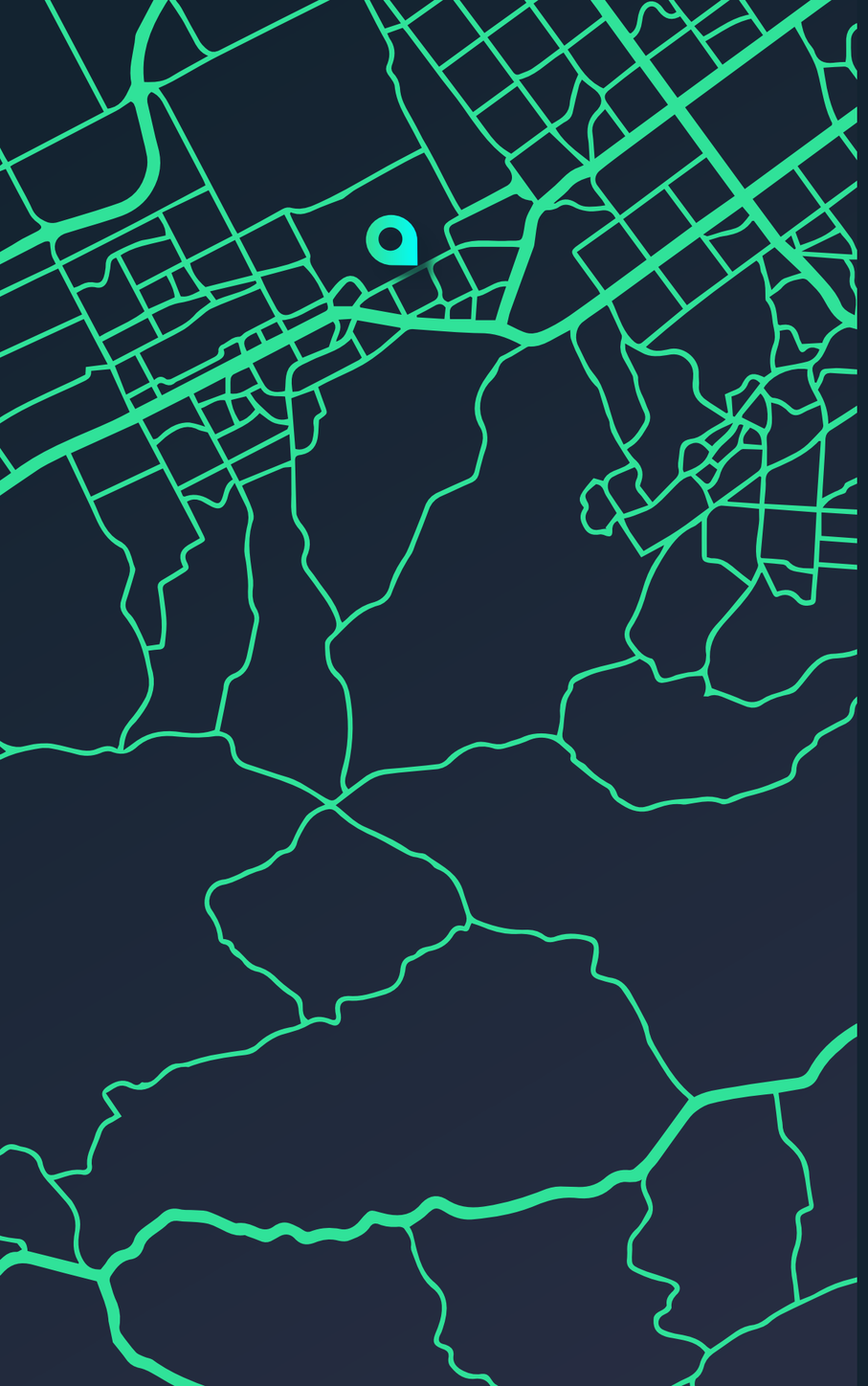
Sometimes, addresses are so bad that even the best address validation fails to find correct matches. In this case the addresses should be returned as invalid, so they can be corrected manually prior to geocoding.

If the geocoding API you're considering doesn't include address validation, you'll need to pay extra for an additional address verification service to clean up your data first. Adding another service—an additional step—will cost you more time, money, and complexity, so keep that in mind when comparing costs.

54% of B2B businesses say their biggest challenge to achieving success is the **absence of data quality and completeness**.[2]

Points To Cover On Address Validation

- Does the provider validate and standardize addresses before geocoding?
- How does the software treat addresses that are invalid or not recognized?
- If validation isn’t offered, which supplemental services should be used for validation?



2 Does The API Provide “As Advertised” Accuracy?

Geocoding unlocks hidden business value from your address data. For example, what insurance risks does this address have nearby? What specific service area is it in?

But all that data is useless if it isn’t accurate. The more precise your geocodes are, the more you can reduce costs, and increase profits.

So how do you know you’re choosing the most accurate geocoding API?

Ask about **match rate**, **geocoding accuracy**, and **cascading match logic**.

What Is It?

A matched address is worthless if it's not precisely geocoded. The **match rate**, or number of addresses that were recognized and precisely geocoded, is what matters to your business operations. The match rate, or the provider's level of confidence, influences the amount of business decisions that you can make with strong confidence.

Geocoding accuracy translates the latitude and longitude to the type of location it corresponds to. This can be anything, such as an address point located on the **rooftop of a building**. Rooftop-level accuracy is the gold standard for geocodes. Other geocoding accuracy levels might be a geocode to the nearest street intersection, a Parcel Centroid, a ZIP Code, city, or State Centroid. The more precise the geocode is, the better your location insights will be.

Being able to identify the precise location of the primary structure on a parcel can make a huge difference when it comes to insurance quotes, city planning, telecommunications, and more. Even being off by just a dozen feet could seriously skew the results.

Many providers advertise their location accuracy as "rooftop geocodes." The catch? There is no governing body or organization that determines what constitutes "rooftop-accuracy." Each provider seems to have a different definition. Below are a few ways different providers define "rooftop geocode."

- Rooftop Geocode: a geocode somewhere within the block of the desired rooftop
- Rooftop Geocode: a geocode on the street in front of the parcel
- Rooftop Geocode: a geocode anywhere inside the parcel where the building is located

These conflicting definitions of "rooftop-accuracy" make it difficult to compare levels of accuracy simply by the term "rooftop" alone. None of the above examples are truly rooftop accurate and create confusion.

Let’s dig into accuracy more—looking at rooftop accuracy and cascading results.

Rooftop Geocoding Accuracy

It’s important to drill down and find out if the geocodes provided are ***actually*** rooftop accurate or simply ***advertised*** that way. Geocoders generally provide free testing lookups for benchmarking—and benchmarking is the best way to find truth.

Inaccuracies become more apparent as parcel size increases. By geocoding farms, large parcels, and plots with irregular boundaries, you’ll easily find which geocoders are most accurate.

Cascading Results

In cases where a rooftop geocode isn’t found, does the geocoding API automatically cascade to the next level of accuracy? Does the provider tell you the level of accuracy achieved?

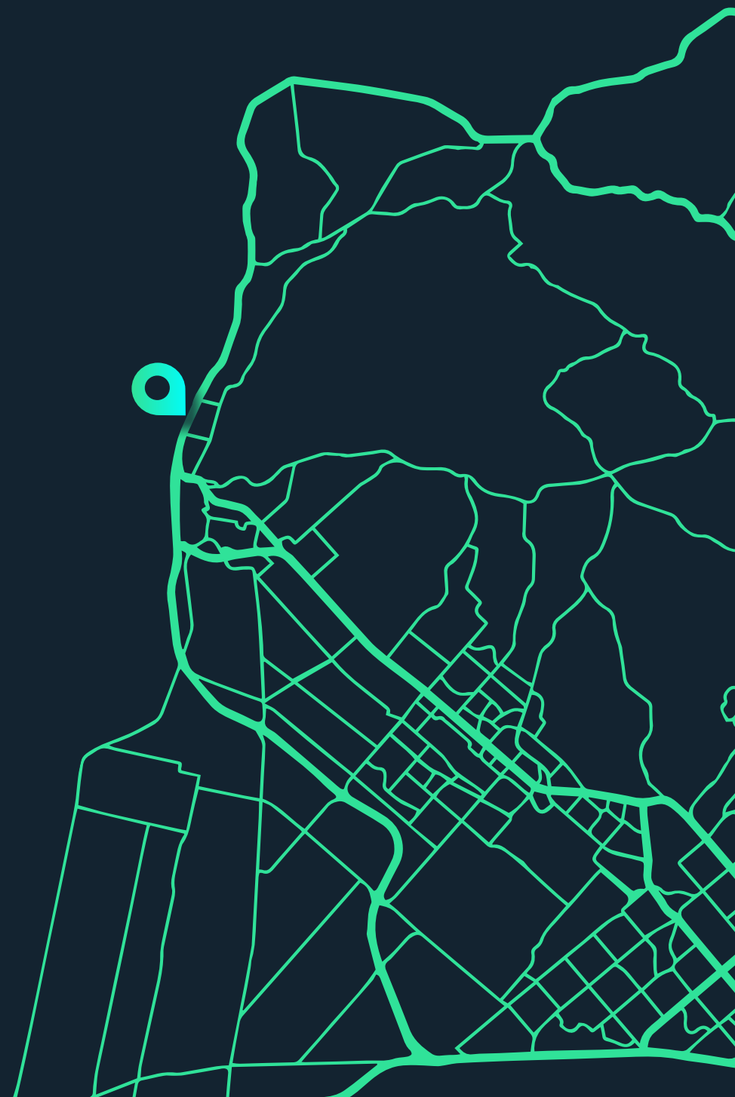
“Cascading match logic” is a strategy used to provide the greatest number of matches—and the highest accuracy available for matches made. An API that provides cascading results runs addresses against multiple conflated datasets, starting with the most accurate. It could, for example, match addresses against the following data levels (if available):

- Rooftop Address Point
- Parcel Centroid
- Street Address Interpolated
- ZIP+4 Accuracy
- ZIP+2 Accuracy
- Street Centroid
- 5 Digit ZIP Code Centroid or City Centroid

Rooftop Address Point is the most accurate and is the gold standard for quality geocoding. A good geocoding API would:

1. Look for Rooftop Address Point matches.
2. Where Rooftop Access Point isn’t found, a second and third pass would look for Parcel Centroid and Street Address Interpolated level matches.
3. Any addresses still unmatched would be run against ZIP+4 , ZIP+2, Street Centroid and 5 digit ZIP Code and City Centroid.

After matching, the level of accuracy attained should be explicitly stated in the output. After all, a geocode that accurately marks the rooftop of a home and a geocode that marks the center of a city vary greatly in usefulness and application. To mark both types of geocodes simply as “match” would be potentially harmful.



Why Does It Matter?

When it comes to location data accuracy in geocoding, here are 3 hidden software shortcomings that can sabotage your project fastest.

1. Geocodes advertised as “rooftop,” that are less accurate than advertised.
2. Geocodes that don’t automatically cascade to the next level of accuracy.
3. Geocodes where the “match-type” isn’t defined.

All 3 quickly lead to flawed business decisions and outcomes.

Points To Cover On Accuracy

- What level of geocode accuracy is suited to my business needs (rooftop, parcel centroid, interpolated, etc.)?
- Are the provider's geocodes actually rooftop accurate after benchmarking?
- Is cascading matching offered by the geocoder?
- Are the geocoders match types explicitly stated in the output?

Going Beyond Postal Addresses

Some services can also provide you with the geographic coordinates for over 15 million non-postal addresses. These are valid US addresses that aren't included in the USPS database that the USPS doesn't recognize as mailable.

Accessing postal AND non-postal geocode data is crucial to improving services in many industries such as telecom, insurance, logistics, and real estate.

3 How Are No-Matches Handled?

What Is It?

A **no-match** is what happens when a geocoder can't find a match for an entered address. "No-matches" can occur because of typos, missing components, address changes and dozens of other reasons. The desired behavior would be a response indicating that no matches were found.

However, not all geocoders work according to that logic. A **false positive** geocode occurs when the address is marked as successfully found, but the provided geocode matches the **wrong** location. Behind the scenes, false positives are what happen when geocoders make guesses on no-match addresses.

A no-match response is better than a false positive.

Why Does It Matter?

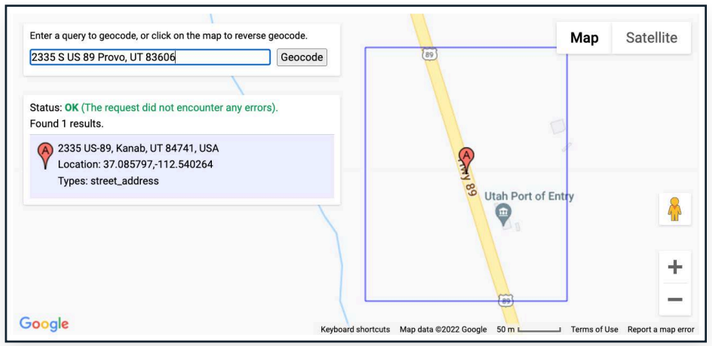
Knowing how no-matches are handled tells you how reliable the output data really is.

An easy example that demonstrates the value of identifying no-matches instead of risking false positives can be found close to home for those of us at Smarty.

The headquarters of Smarty is 2335 S **State St**, Provo, UT 84606. Another correct way to write the address is 2335 S **US 89** Provo, UT 84606. Streets commonly have more than one correct name. Both **State St** and **US 89** are correct designators.

Now, try to find the Smarty office using Google's Geocoding API. Try entering the **US 89** variant:

2335 S **US 89** Provo, UT 84606



Google's API returns a response of "OK (The request did not encounter any errors)." And gives us the geocode.

Great! No errors and we got the geocode.

Looking a little closer though, you will see that Google gave you an address in a different city and changed the ZIP Code in the response. The address provided is actually **266 miles away from the entered address!** This is a classic false positive.

False positives are one of the most dangerous forms of bad data because they indicate success despite actual failure.

Examples of false positives come and go as geocode providers make updates to their software and as public and private datasets shift. The above example can be replicated using the Google Maps Geocoding API demo as of February 2022. A different false positive can also be produced with the same address using maps.google.com

Imagine batch processing a million addresses and then being told there are between 2,000 and 5,000 geocodes that match wrong locations between 1 block and 500 miles away. Could you find all the false positives? How long would it take? Would you be 100% confident you found them all?

For most organizational use cases, receiving a no-match response is more helpful than a false positive because you then have an opportunity for manual intervention instead of acting on inaccurate data. It's better to flag the address for manual review.

If no match on any level is found, a quality geocoding API won't guess. The API will instead tell you that there was no match found. The bad data can be thrown out or manually validated which leads to better informed decisions.

Points to Cover On No-Match Handling

- Will the geocoder provide explicit “no-match” responses?
- Does the geocoder give false positives without a confidence score?

4 Are Sub-Address Geocodes Offered?

What Is It?

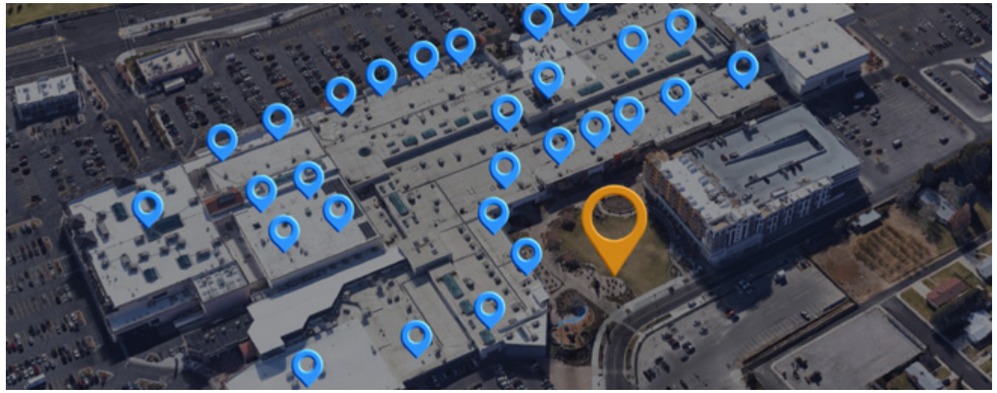
Some geocoding APIs can get even more granular than rooftop accuracy. After all, a single rooftop or parcel doesn't always mean a single address. Apartment buildings, strip malls, business parks, and manufactured home parks contain many sub-addresses.

If you're looking to get the most out of your geocoding solution, **ask if the geocoding API can correctly identify individual units** in a strip mall, apartment complex, office complex, or mobile home park.

Keep in mind that if the service isn't truly "rooftop accurate," they're definitely not going to be able to provide sub-address geocodes.

Why Does It Matter?

Sub-address geocodes increase the options you have for visualizing addresses and providing detailed data to decision makers. For example, where a particular condo in a larger complex sits relative to a busy highway, beach, or river makes a large difference for risk assessment.



Points To Cover On Sub-Address Geocodes

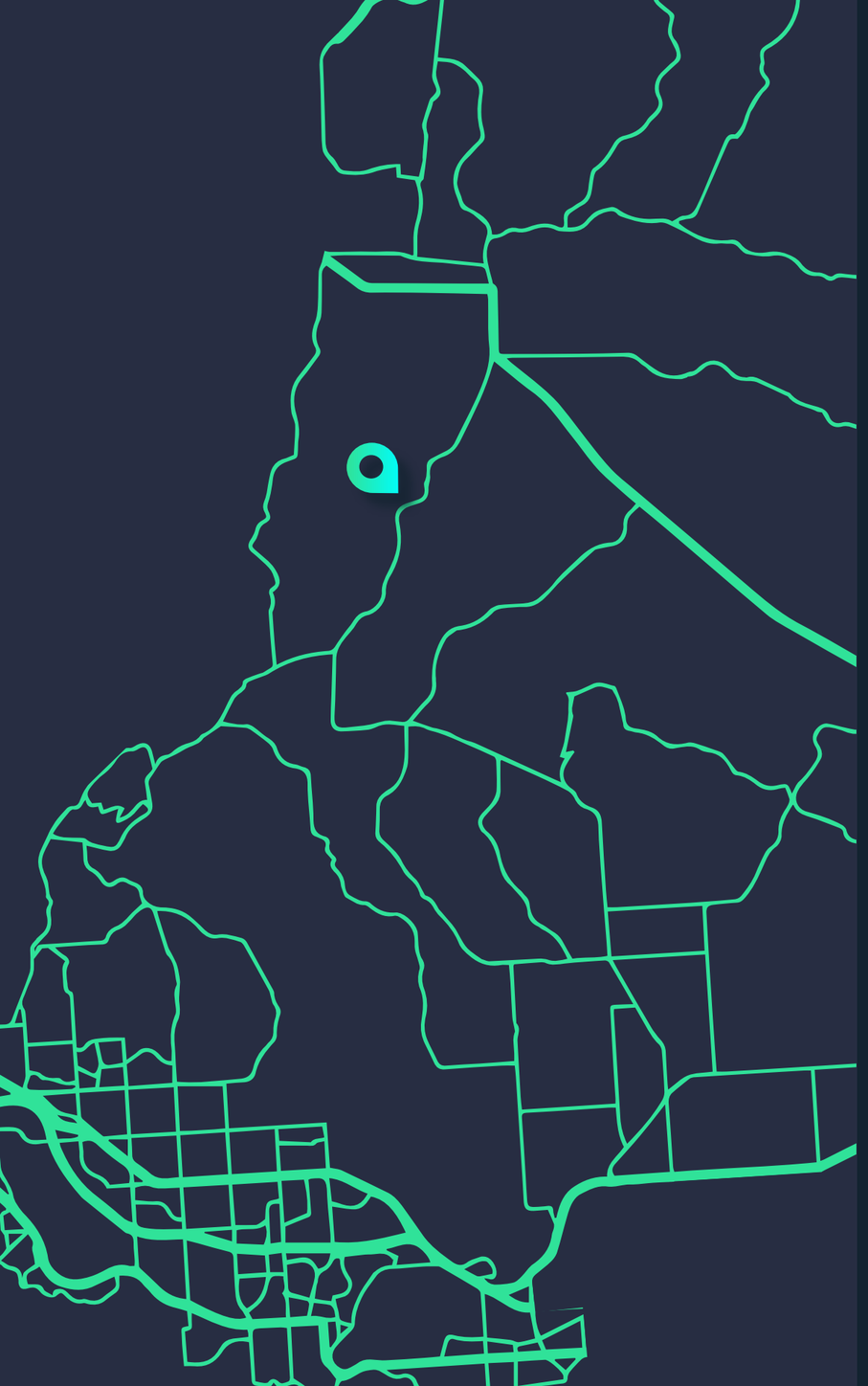
- Would sub-address geocodes be beneficial for my organization?
- Does the provider offer sub-address geocodes?
- How expansive is the provider's sub-address geocode coverage (if at all)?

Location Data Is Everywhere

Our world changed when the iPhone 3 launched with Global Positioning System (GPS) integration in 2009.

Location data started streaming in from millions of smartphone users.

Today, it's believed that at least **80% of all data is geographic in nature**, as the majority of information around us can be georeferenced.[3]



5 What Are The API Capacity & Speed Capabilities?

Efficiency is pretty essential to most businesses. Aren’t we all trying to get more done in less time—every day?

So it stands to reason that the higher the capacity and faster your geocoding API works, the faster you can utilize that address data and make money.

There are a few steps in between “process address data” and “make tons of money,” but you get the idea.

What Is It?

Geocoding speed is measured by how many addresses can be geocoded over a sustained amount of time like a second, hour, day, or month.

Slower geocoders measure speed in seconds-per-geocode, but that isn't fast enough for any type of scaled operation. For many business needs, producing dozens, hundreds, and even thousands of geocodes per second isn't fast enough either.

So what's stopping geocoding providers from delivering on your need for speed?

Typically, the speed of a geocoding API is limited by the server resources of the geocoding provider. If a service provider doesn't have enough server capacity, they can't handle a mass quantity of geocodes at one time. When a geocode influx overloads the system, these geocoding APIs commonly respond in one of two ways:

1. The geocoding system bogs down and slows to a crawl.
2. The geocoder behaves as a hall monitor and forces all users into a line.

Both scenarios have the same outcome—waiting a *long* time for your geocode results.

Operationally efficient, high-performing businesses shouldn't be forced to wait.

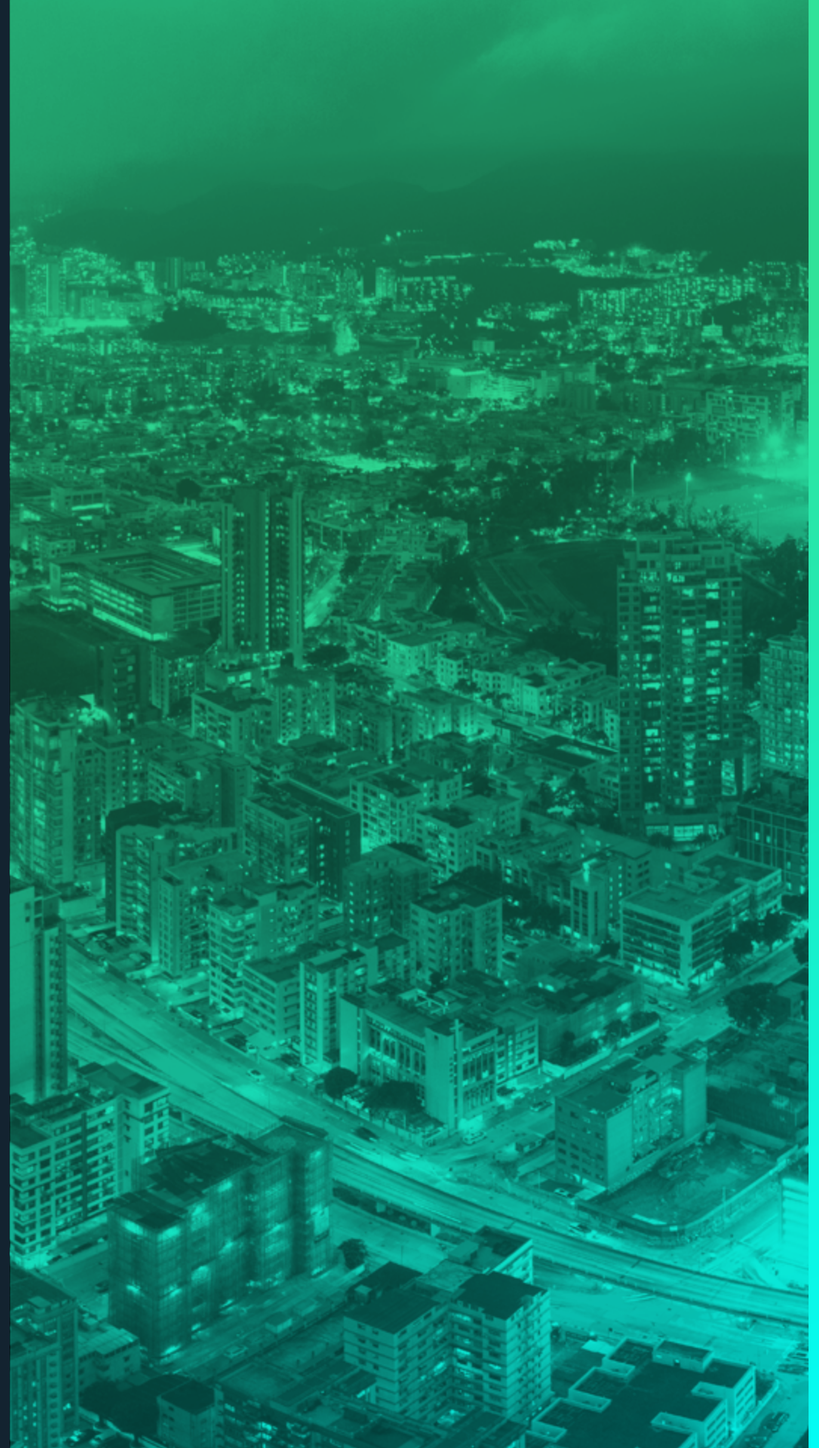
Geocoding API speed is measured in "query per second" rates, or QPS. Published geocoding API provider speeds range from 27 QPS all the way up to 100,000+ QPS.

Why such a wide discrepancy among those speeds? It comes down to how each provider approaches the demand.

Some throttle their speed to a set number of geocode queries per second. By keeping a speed limit on geocode processing, they can predict and control loads and provide a predictable (albeit, not very fast) user experience.

Other providers aren't limited by artificial throttling but they are limited by their hardware.

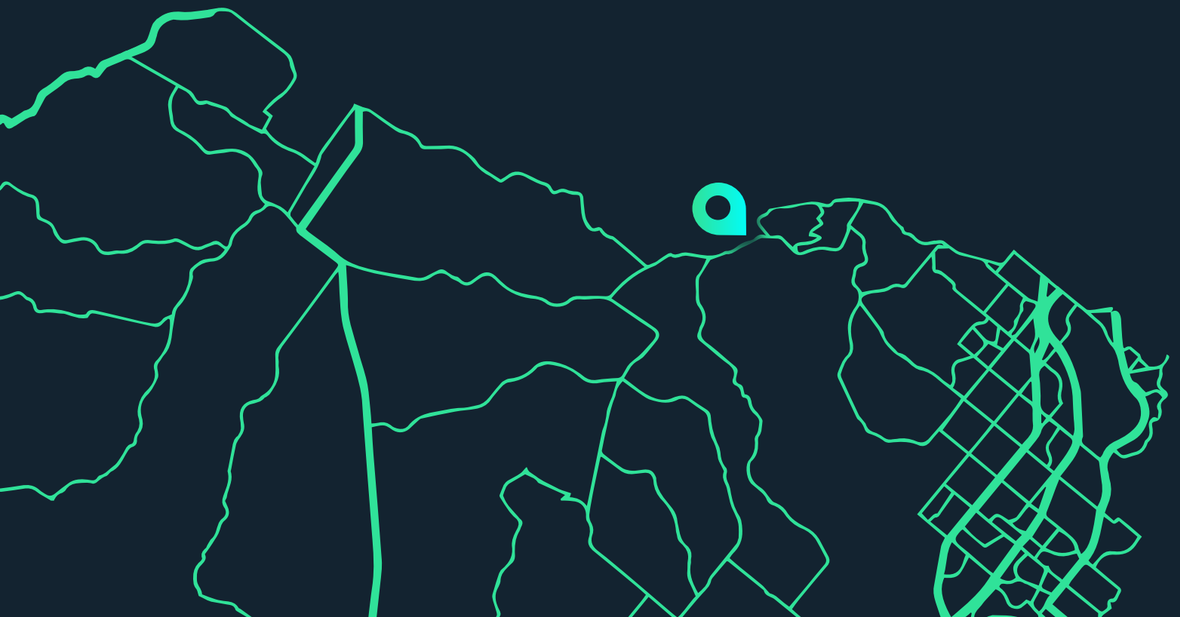
And some cloud-based providers spin up new servers almost instantly to accommodate near infinite usage, providing very high speeds and virtually unlimited capacity for users.



Why Does It Matter?

Why have a nearly infinitely scaling geocoding system? Here is one example. In the property and casualty insurance industry, profitability hinges on the accuracy of risk assessments—location being a key factor in those assessments. Because location attributes change frequently, many insurance companies update geocodes for their whole database of hundreds of millions of addresses every month. That's simply not practical without a fast geocoding solution.

Choosing a high-capacity geocoding API pays dividends in terms of efficiency and productivity. The faster you get the information you need, the faster you can act on it and see results.



Points To Cover On Capacity & Speed

- What speed and capacity requirements fit my business needs?
- What are the hardware / software limitations affecting the QPS of the provider?
- What does the provider's SLA (Service Level Agreement) state about downtime, latency, outages, response time, QPS, and server capacity that impact speed and capacity?

Of course, while important, speed and capacity aren't the only factors to consider when choosing your geocoding service.

The type of deployment—on-premise vs. in the cloud—can greatly impact both performance and cost of your geocoding solution.

6 Are There On-Premise & Cloud-Based Options

What Is It?

Local or on-premise geocoding is geocoding without calling cloud-based web services on the internet. The entire geocoding process can take place behind your firewall. On-premise geocoding can be beneficial if your company has strict data policies. Responsibility for network and server maintenance (as well as the performance of all installation instructions) rests with your organization.

Cloud-based geocoding is geocoding through a web-based software service. The performance, server and network responsibilities rest with the provider.

Why Does It Matter?

On-Premise Geocoding Solutions

Many companies turn to on-premise geocoding solutions to solve their speed challenges. On-premise geocoding has the upside of high speeds, but can also come with significant costs.

You might consider an on-premises product if your organization has additional privacy or security requirements that require an on-premise solution, or if a transaction-based business model won't work for your organization.

Keep in mind that on-premise geocoding requires constant training, security, updates, hardware maintenance, and key management. If you're considering on-premise geocoding, you should budget three times the licensing costs for upkeep. So, a $100,000 local geocoding implementation license will likely cost around $300,000 to maintain annually.

Cloud-Based Geocoding Solutions

Many products that were previously only available on-premise or as software that had to be downloaded to your desktop are now available in the cloud—commonly known as "software as a service" or SaaS.

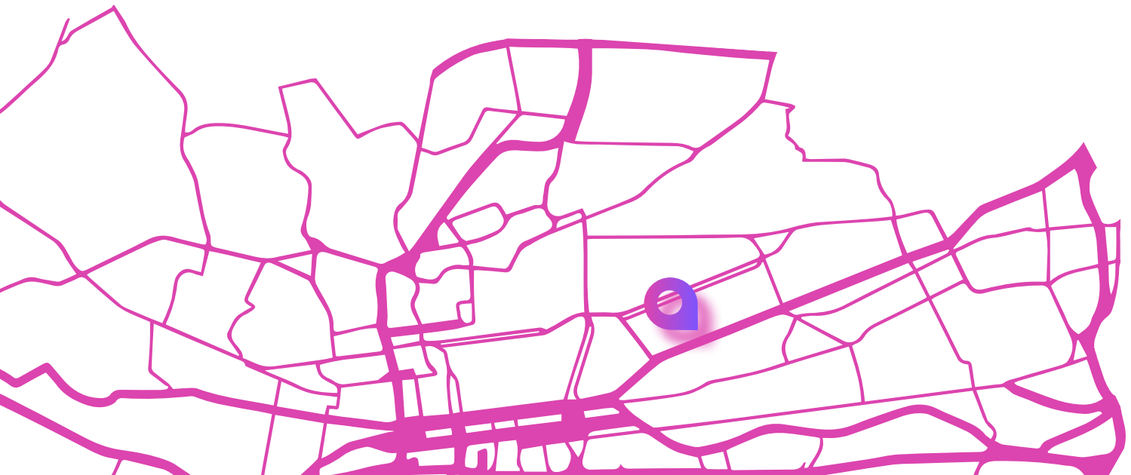
SaaS takes advantage of modern technological features like virtualization and cloud-based scalability. Thanks to modern virtual machines, it's easy to create a new instance for each customer—which can lead to improved speed. Within the last few years, some cloud based geocoders have developed systems that achieve the same or better capacity and speed than local on-premise solutions.

With cloud-based infrastructure, end-users don't need to bear the cost and time of updating huge reference data sets and making sure that everything stays updated and coordinated together. All the hardware, data updates, and security are handled by the service provider

Your organization's needs, privacy rules, and technical knowledge will all factor into your decision of on-premise versus cloud-based.

Points To Cover On Cloud vs. On-Premise Installations

- Do our internal privacy, security, data, or other policies require the extra complexity of an on-premise solution?
- (If on-premise) - What are the time and technical requirements for initial setup?
- (If on-premise) - What are the ongoing costs, time, and technical requirements for maintenance, security, updates, and licensing for the size of installation we would require?



7 Is Use With Third-Party Basemaps Permitted?

What Is It?

Geocoding allows you to transform your information databases into compelling, modern maps. Displaying complex data on a map can be an effective way to present your company's data, whether that information is customer locations, factories, stores, a car fleet, or other subjects.

With custom maps of your data, decision makers can easily visualize relationships, see opportunities, and pursue next steps with confidence.

Why Does It Matter?

Just because you may be permitted to store geocodes, doesn't mean the terms of service allow the display on third-party maps.

Once you've determined if you're allowed to store geocodes, you should also ask if the provider allows you to display their geocodes on another mapping or GIS platform such as ArcGIS, QGIS, BatchGeo or OpenStreetMaps.

The most well-known map provider, Google, does not play nice with other mapping platforms. If you're going to display a geocode from Google on a map, they require you to display them on a Google Map. No exceptions.

However, other geocoding providers like Esri, Geocod.io, and SmartyStreets all allow the use of third-party mapping platforms. This opens up a world of possibilities for you.

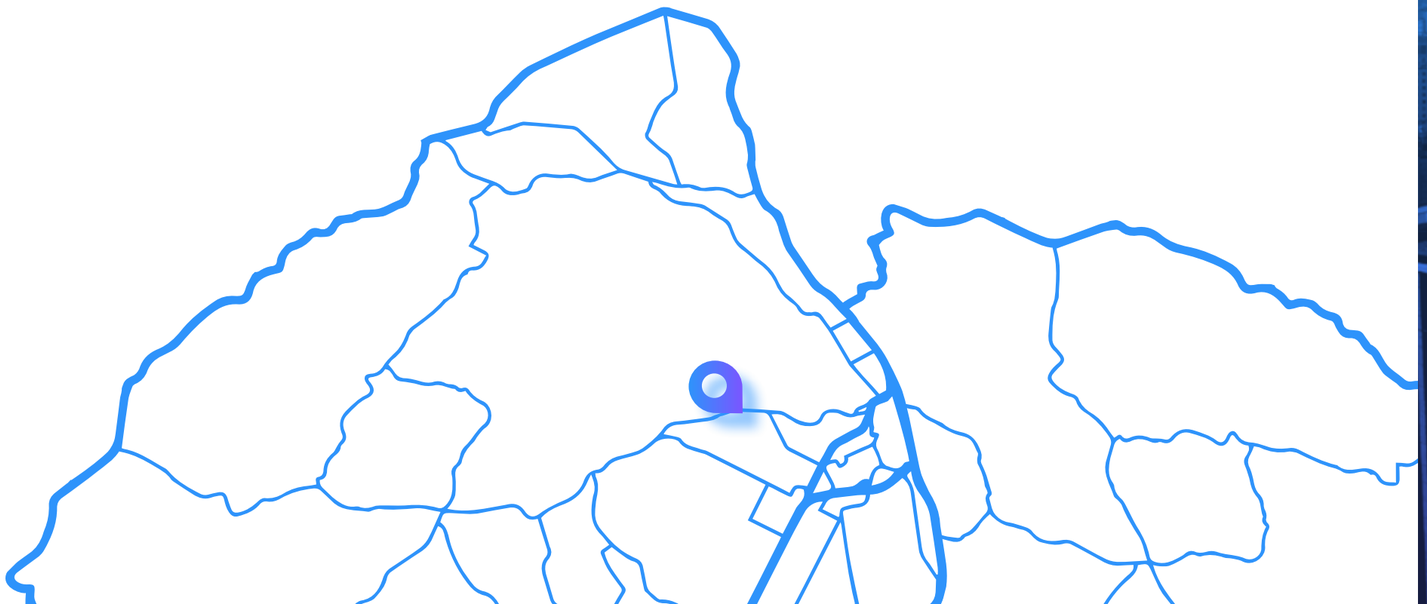
A few examples of how industries can use third-party maps with geocodes:

- Telecommunications companies use geocoding to visualize current coverage, coverage gaps, and the best sites for additional towers.
- Government agencies can use geocodes to create maps of voting precincts, determine polling locations, and assess other services and programs.
- Insurers looking for more accurate assessments of clients' exposure to risks like flooding can use geocoding to determine the level of exposure at specific points on a map.
- Marketers can create maps to help determine prime target areas for promotional activities and ensure that the offers align with services available in those areas.

Over 70% of organizations consider data visualization/mapping critical or very important to accomplishing their goals.[4]

Points To Cover On Use With Third-Party Basemaps

- Would my use case benefit from being able to display geocodes on third-party basemaps?
- Does the provider’s terms of service allow their geocodes to be used in conjunction with third-party maps?



8 Would Additional Location Data Services Be Helpful?

What Is It?

Validated Address Autocomplete

If you've ever started typing an address into Google Maps and it finished it for you, you've benefited from address autocomplete.

Address autocomplete is a web form feature that suggests street addresses to users as they type an address into a form. Offering address autocomplete reduces the number of keystrokes & mistakes that a user types, which makes data submission faster and more accurate.

The least expensive place to validate data is at the point of entry. If you're trying to keep your organization's data clean, organized, and accurate, you should be using address autocomplete.

WARNING

Not every autocomplete provider suggests validated, standardized addresses. Google, for example, will suggest addresses but doesn't validate the building number. This leads to fake addresses entering through the autocomplete system that get passed onto the geocoding API.

Implementing an Address Autocomplete API that validates the address provides your programmers with options for type-ahead search functionality inside your applications. Because the program sends queries while the user is entering an address, the API provides real-time address predictions with each keystroke.

When implemented correctly, autocomplete can:

- Simplify the data entry process for addresses.
- Eliminate typographical errors.
- Standardize addresses to the local postal authority format.
- Validate that an address is real and deliverable.
- Enhance address data quality by limiting invalid entry.

When an address autocomplete API (that only suggests validated addresses) is used in conjunction with a geocoding API, only valid, standardized addresses get passed into the geocoding API. This approach reduces wasted lookups, false-positives, and no-match addresses. It also increases the quantity of rooftop matches. Win-Win.

Prioritize Results Near A Provided Location

Another benefit of using an autocomplete API that validates addresses is that you can focus on results only in a specific area—such as the user's location or within a service area.

An autocomplete tool that offers this feature will approximate the location of the user based on their IP address, a predefined set of ZIP Codes, cities, or states and first suggest addresses that are close to the geographic location of that IP address. Suggesting addresses that are close to a user's physical location or within an area can help a user choose the correct address more quickly.

Not all autocomplete tools offer this feature. Using an autocomplete API that doesn't have a geolocation feature may require the user to type in more characters in order to find the correct address, and the more characters a user has to type, the longer the data entry process takes. Additionally, there is a greater chance that the user will enter a typographical error. Autocomplete tools that don't prioritize results based on user location are simply not as efficient.

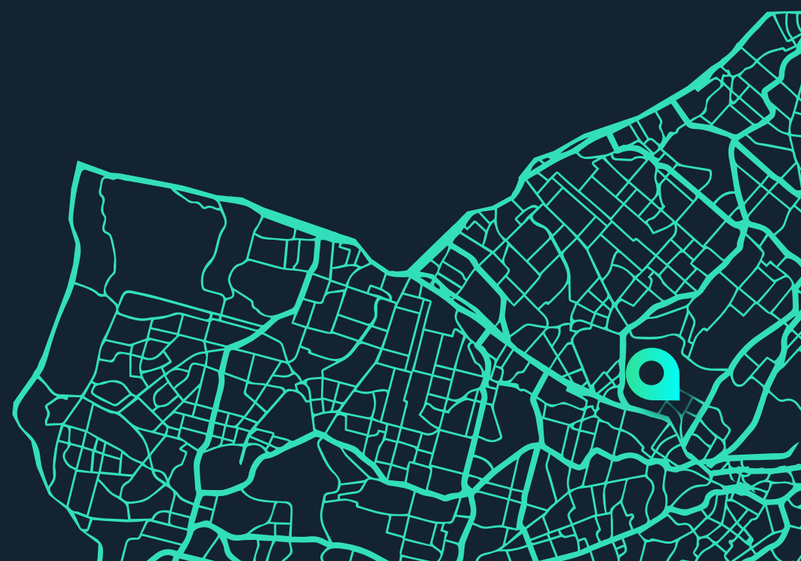
Here's an example: your pregnant wife wants pizza delivered—RIGHT NOW. So you go to her favorite pizza shop's website to order the Hawaiian pizza of her dreams. Upon entering your address "110 Wayward Street," a normal autocomplete would predict addresses across the globe that started with "110" in them.

There are hundreds of thousands of addresses in the world that begin with "110". You do not have time to sort through all those addresses to find yours, and the longer you spend typing your whole address, the more "hangry" your wife is getting.

By prioritizing results based on your location, the autocomplete might say, "Yes, there are hundreds of thousands of addresses with that number combination, but there are only 3 within 10 miles of this user's IP address." The autocomplete would then display those 3 addresses first in a dropdown box.

Thanks to the autocomplete API you can then select the validated, standardized version of your address in 3 keystrokes instead of 30, get that pizza ordered, and save the day.

As you can see, while address autocomplete isn't a strictly necessary part of geocoding, it's definitely a data quality feature to consider to improve the quality of your output.



Reverse Geocoding

There's one last feature to consider when evaluating your location intelligence needs, and that's reverse geocoding.

In a world of smartphones and Internet of Things devices, location data is all around us.

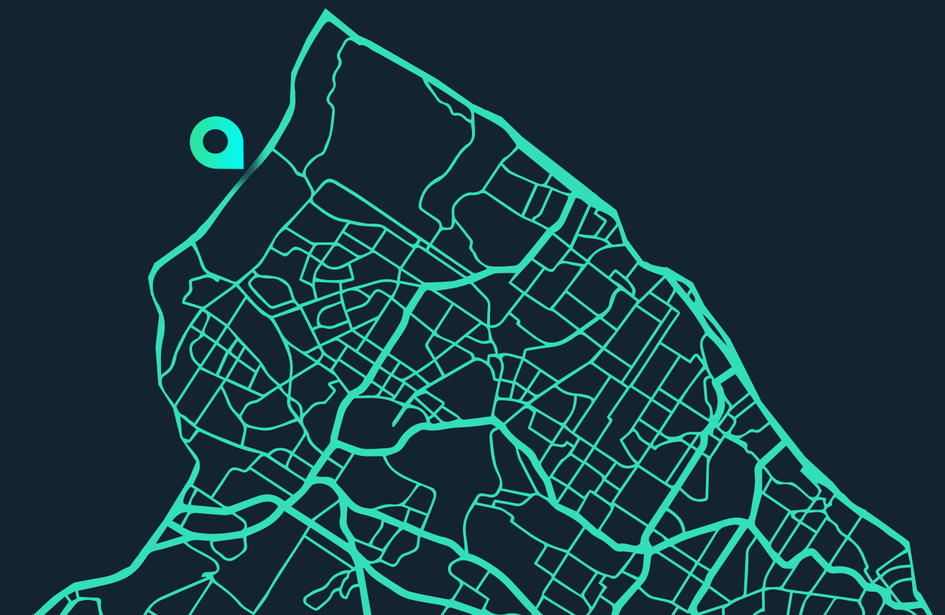
Reverse geocoding takes latitude/longitude coordinates and converts them into corresponding human-readable addresses and address components like a house number, street, postcode, city, etc.

Reverse Geocoding is an essential component in many location data science applications. For example, it's frequently used for location-based services in industries like Government and Healthcare, to convert GPS coordinates into readable street addresses.

When 911 dispatchers answer emergency calls, they rely on accurate information and need each call point to translate into an exact physical location. An approximate location or inaccurate location could result in longer response times by emergency service personnel.

Some more common uses of reverse geocoding include fleet tracking, delivery tracking, fitness trackers, smartphone GPS services, adding location info to photos taken on smartphones, and converting prices to local currencies for online commerce applications.

Reverse geocoding is often offered as an add-on to a geocoding service. Depending on your business needs, you may not require reverse geocoding, but it's worth looking into.



Reverse geocoding isn't limited to streets, but can also be used to **identify a ship** in a canal or lake!

After all, it makes more sense to describe a ship location using nautical map identities.

Conclusion

According to a 2020 Forbes article, 53% of enterprises say that location intelligence is either critically important or very important to achieving their goals.[5]

Using a fast and accurate geocoding solution to enhance your location intelligence can give your organization a huge competitive advantage.

As you're comparing geocoding APIs and attending demos, make sure you're considering and asking these questions to yourself, your team, and providers you are considering:

Address Validation

- Does the provider validate and standardize addresses before geocoding?
- How does the software treat addresses that are invalid or not recognized?
- If validation isn't offered by the provider, which supplemental services should be used for validation?

Accuracy

- What level of geocode accuracy is suited to my business needs (rooftop, parcel centroid, interpolated, etc.)?
- Did the provider's geocodes actually end up being rooftop accurate after benchmarking?
- Does the geocoder offer cascading matching and explicitly state the match types in the output?

No-Match Handling

- Will the geocoder provide explicit "no-match" responses?
- Does the geocoder give false positives without a confidence score?

Sub-Address

- Would sub-address geocodes be beneficial for my organization?
- Does the provider offer sub-address geocodes?
- How expansive is the provider's sub-address geocode coverage (if at all)?

Capacity & Speed

- What speed and capacity requirements fit my business needs?
- What are the hardware / software limitations affecting the QPS of the provider?
- What does the provider's SLA (Service Level Agreement) state about downtime, latency, outages, response time, QPS, and server capacity that impact speed and capacity?

On-Premise vs. Cloud-Based

- Do our internal privacy, security, data, or other policies require the extra complexity of an on-premise solution?
- (If on-premise) - What are the time and technical requirements for initial setup?
- (If on-premise) - What are the ongoing costs, time, and technical requirements for maintenance, security, updates, and licensing for the size of installation we would require?
- Does the provider offer cloud options that will meet my needs? What are the time and technical requirements?

Third-Party Basemaps

- Would my use case benefit from being able to display geocodes on third-party basemaps?
- Does the provider's terms of service allow their geocodes to be used in conjunction with third-party maps?

Pricing

- Is fixed pricing offered by the API provider?
- What are all of the provider's pricing factors? Annual memberships? Multiple APIs? Per geocode fees, speed, accuracy, bandwidth?

Additional Geocoding Features

- Would validated address autocomplete be of benefit for my geocoding needs?
- Do I need prioritized results near specific locations (cities, ZIP Codes, IP address)?
- Do I also need reverse geocoding?

Choosing the right geocoding API is the first step toward targeting key demographics, understanding business risks and opportunities, and making better business decisions.

Now that you understand the key features to look for in a geocoding API, you can confidently make the right choice for your organization.

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