

## Privacy and Data Security Policy (Last Updated: Aug 2022)

xMap provides consumer intelligence services using data elements (such as restaurants data, real estate data, social media data) that we collect and infer online from web scraping and other government data sources. The following describes our data collection and use practices for the information that we collect our data. It also describes the way we process and enrich our data. This statement doesn't apply to the data collection and use practices of our clients and partners and the websites, services, and applications that they operate.

### Data We Collect

We collect data from a variety of sources and websites and enrich the data using available government datasets and datasets with licenses that enable commercial use. In this document we refer to the data as "Service Data," which includes the following:

**Data We Collect.** Using services such as restaurant search, real estate search, or other websites, we collect data from those publicly available sources and organize and clean them according to our internal process and regulations.

**Data We Receive from Others.** We receive data that was initially collected (over time and across websites) by our data partners (such as other websites and services), which includes:

**Purchase Data.** Aggregated data from companies that operate large payment information and point of sales.

**Sales Data.** Sales transactions on online websites where the data is aggregated or the user identity is anonymized

**Data We Receive from Other Sources.** We receive data and information from other data sources about points of interest and other location-based information.

## **How We Use the Data We Collect**

We associate the data and information that we collect with the data and information we receive from others. Our technology contextualizes and aggregates this data.

## **Security and Data Retention**

We take steps to help ensure that the data we possess is housed and transmitted securely. We use multiple types and layers of physical and electronic security, including firewall protections, encryption of data during transfer, and strict access controls to personal information. While neither we nor any platform can guarantee 100 percent safety from hacks or illegal intrusion, we make substantial efforts to ensure that this does not occur.

We use public cloud providers (AWS and GCP) for all our data storage and processing applications. For example, we use Server-Side Encryption for protecting data at rest in Amazon S3. This encrypts objects before saving it on disks in its data centers and then decrypts it when we download the objects.

We also enforce encryption of data in transit by using https (TLS) to prevent potential attackers from eavesdropping on or manipulating network traffic using person-in-the-middle or similar attacks.

## **Changes**

If we change our data collection and/or use practices, we will post an updated statement (and a more prominent notice if the changes are significant) with the new practices and when they go into effect. The data and information that we collect are subject to the privacy statement in effect at the time the data and information were collected by us.

## **Legal Obligations.**

Some processing of data may be necessary for us to comply with our legal or regulatory obligations.

## **Contacting Us**

For contacting us, send an email to [contact@xmap.ai](mailto:contact@xmap.ai)

## Restaurants Data collection and processing methodology

Restaurant data has been collected from online sources and fast food aggregators in Japan

Collected data is pre-processed and re-organized in a way that arranges information in a structured manner

Additional data processing and summarization of collected data have been applied to add more attributes.

Administrative boundary data has been collected from government websites and merged with the data

## Data preprocessing / processing methods

### Format change

Data format has been changed and altered from different formats such as XML, JSON, TIFF, and other shapefiles formats to structured column format to be mapped and joined accurately.

### Character encoding fixes

Different sources of data come in a different encoding, each dataset has been pre-processed to unify the language encoding

### Data cleaning

Some datasets contain multiple missing values, missing values are either removed or imputed depending on the case. Some random text values or erroneous text are pre-processed to be normalized.

### Data join/merge

Data from multiple datasets are joined using unique key join, spatial join, and other join methods to add different attributes to each data point to maximize its value

### Zonal statistics

Zonal statistics are applied to raster data to extract the number of people living on a specific circular area either as a total population or a demographics split to represent the demographics structure of the area of people living in that area.

### Geospatial encoding and decoding

Many datasets come in different encoding formats such as the Japan grid system, geo hashes, H3 encoding, or no encoding latitude longitude. The data from different sources are mapped into a unified encoding system and decoded back to coordinates to be matched together accurately