

Enhancing Digital Security, Privacy and TRUST in softWARE

Privacy Adviser

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Privacy policies

WhatsApp Privacy Policy

If you live in the European Region, WhatsApp Ireland Limited provides the Services to you under this Terms of Service and Privacy Policy.

If you live in the UK, WhatsApp LLC provides the Services to you under this Terms of Service and Privacy Policy.

WhatsApp Legal Info

If you live outside the European Region or the UK, WhatsApp LLC ("WhatsApp," "our," "we," or "us") provides our Services to you under this Terms of Service and Privacy Policy.

Our Privacy Policy ("Privacy Policy") helps explain our data practices, including the information we process to provide our Services.

For example, our Privacy Policy talks about what information we collect and how this affects you. It also explains the steps we take to protect your privacy, like building our Services so delivered messages aren't stored by us and giving you control over who you communicate with on our Services.

We are one of the Meta Companies. You can learn more further below in this Privacy Policy about the ways in which we share information across this family of companies.

This Privacy Policy applies to all of our Services unless specified otherwise.

Please also read WhatsApp's Terms of Service ("Terms"), which describe the terms under which you use and we provide our Services.

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Key Updates

Respect for your privacy is coded into our DNA. Since we started WhatsApp, we've built our services with a set of strong privacy principles in mind. In our updated Terms of Service and Privacy Policy you'll find:

You would need 76 working days to read the privacy policies of the online services you use in a year!

Privacy policies are:

- Written in a specialized legal language
- Long
- Boring
- Confusing (sometimes deliberately)





Functionality-to-permission fidelity



Calculator Plus with History

About this app

App permissions

Showing permissions for all versions of this app

This app has access to:

Camera

take pictures and videos

Other

- receive data from Internet
- view network connections
- full network access
- · run at startup
- control vibration
- · prevent device from sleeping

Key features:

BASIC FUNCTIONS. Add, subtract, divide and multiply for everyday calculations.

BIG DISPLAY and BIG BUTTONS. See all features at the first glance. Never miss a button.

Calculator with HISTORY. View the history of calculations and check for mistakes.

Calculator with MEMORY. Store results of the previous calculations and access them anytime.

PERCENTAGE calculator. Calculate tips, discounts and ratios quickly and easily with the percentage calculator.

THEMES. Change the design with the visual theme you like.

MULTI-WINDOW. Work twice as fast with multiple copies of the app on one device.

SUSPICIOUS!!





Why a Privacy Adviser?

The *Privacy Adviser* aims to **improve** and **facilitate** the understanding of the privacy policy and description texts of **Android applications**.

How?

- Automatic inspection and analysis of documents
- Extraction and summarization of relevant information
- Use of Artificial Intelligence:
 - Deep Learning models (DL)
 - Large Language models (LLM)



Functionalities

1. Summarization of documents

2. Annotation of documents

3. Scraper





Summarization of documents: privacy policies

LLM-based summary, makes the **language** of the privacy policy **closer** to the user's

- 1. Personal information collected by Google:
- Information you provide when creating a Google Account (name, password, phone number, payment information, email address).
- Content you create, upload, or receive from others (emails, photos, videos, documents, comments on YouTube videos).
- Information about the apps, browsers, and devices you use (unique identifiers, browser type, device type, operating system, mobile network information, IP address, crash reports, system activity, date, time, and referrer URL of your request).
- Your activity on Google services (search terms, videos watched, interactions with content and ads, voice and audio information, purchase activity, communication and shared content, activity on third-party sites and apps using Google services, Chrome browsing history).
- Your location information (GPS, IP address, activity on Google services, Wi-Fi access points, cell towers, and Bluetooth-enabled devices).





Summarization of documents: descriptions

LLM-based summary, describes shortly the **functionality** of the app and highlights the **required permissions**

Summary:

Temu is an online shopping platform that offers a wide range of products including fashion, home decor, handmade crafts, beauty & cosmetics, clothing, shoes, and more. It provides free delivery and secure checkout options. The app also allows users to follow its social media accounts for updates.

Permissions that may be required:

- Location: Temu might need to access your device's location to provide accurate shipping details and to ensure that the products are available in your region.
- Files: The app may require access to your files if it allows you to upload any images or documents, such as proof of address or identity for delivery purposes.
- Notifications: Temu will likely need to send notifications about order updates, deals, and offers.
- Phone: The app may need to make and manage phone calls for customer service purposes.

Privacy concerns and recommendations:

- Potential privacy concerns: Sharing your location and files can be a privacy concern. Also, allowing





Annotation of documents: privacy policies

Section-based search, the user can search the **segments** of privacy policy related to different **types** and **uses of personal information**

Types of personal information

Contact

City, postal address, e-mail address, phone number, etc.

Demographic

Gender, age, etc.

Identifier

Codes that allow identifying the device used to access the service

Location

Physical location of the user obtained from sensors such as GPS, WiFi, etc.

SSO

Allowing another company (e.g.: Facebook) to manage the access to the service

Uses of personal information

Commercial use

Sharing with other companies

User choice and control

Access, edit and deletion

Data retention

Data security

Changes of policy

International & Specific Audiences

Examples:

- European (stronger privacy enforcement)
- Children

Respect of the option not to track you

Other





Annotation of documents: description

Permission search, the user can search for **permissions** and **retrieve** the **segments of** the **app description** (if any) where the **functionality requiring** that **permission** is outlined

Permissions Calendar

Call log

Camera

Contacts

Location

Microphone

Phone

SMS

Storage

"Your conversations are organized in one place and saved on your device for up to 90 days"

Storage

"Set an auto-reply message: Turn on Driving Mode to disable message notifications# send an auto-reply message and even let pre-selected contacts view your current location using Glympse Personalize Your Conversations: Customize the background with your photos# built in themes# fonts# colors# signatures and even conversation tones"

Contacts

Location

SMS





Scraper: making it easier

Users can provide the URL of the application at the Google Play Store and the texts of the privacy policy and the app description will be scraped from it. Then, they will receive the complete analysis of the application automatically.

URL Copy&Paste Tutorial Video	
URL*	(1)
https://play.google.com/store/apps/details?id=com.whatsapp	
Launch	

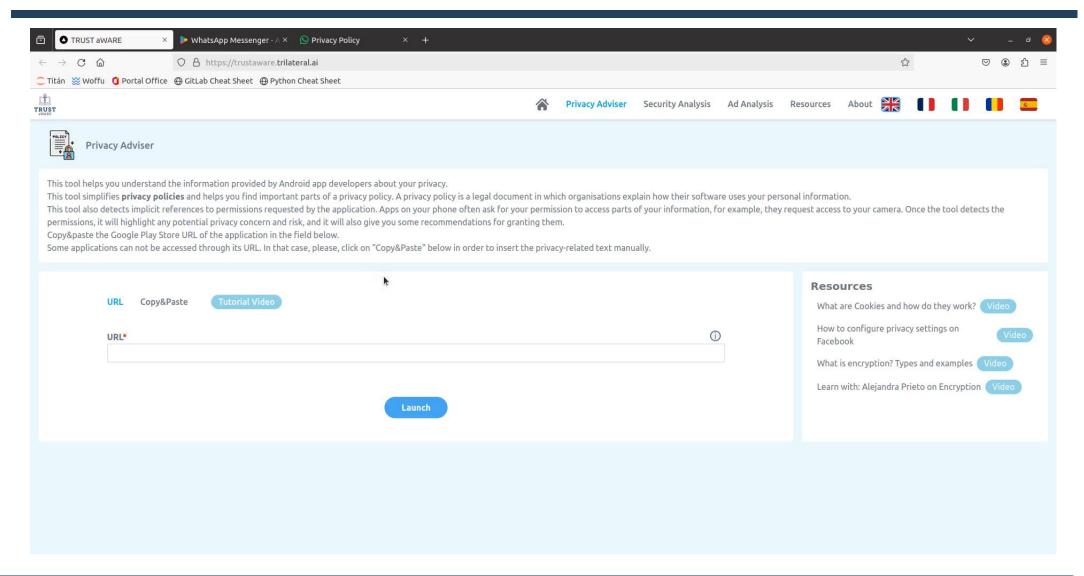
https://trustaware.trilateral.ai/

Available in English, Spanish, French, Italian and Romanian





Demo





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THANK YOU!

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