

GhostLayer

User Guide

Version 1.0.0

Desktop PII Anonymization Tool

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1. Introduction

GhostLayer is a desktop text anonymization tool designed to detect and mask sensitive data before sharing documents with AI services like ChatGPT, Claude, or other LLMs. It operates as a completely offline application with zero data retention.

GhostLayer scans your documents for personally identifiable information (PII) and other confidential details, then replaces them with secure placeholders. You can then safely copy the anonymized text to any AI service without risking data exposure.

Key Features:

- 100% Offline Operation — Your data never leaves your computer
- Learning System — The app remembers your corrections and gets smarter over time
- Side-by-Side View — Compare original and anonymized text instantly
- Multi-Language Support — Works with English and Russian text
- AES-256 Encryption — User rules are encrypted and machine-bound
- Multiple Formats — Supports PDF, DOCX, and TXT files

2. System Requirements & Installation

System Requirements:

- Operating System: Windows 10 or later (64-bit)
- Memory: At least 4 GB RAM; 8 GB recommended for large files
- Disk Space: Approximately 250 MB for full installation
- No internet connection required after installation

Installation:

1. Download the GhostLayer ZIP archive from the official website.
2. Extract the ZIP file to your preferred location (e.g., C:\Program Files\GhostLayer).
3. Run GhostLayer.exe to start the application.
4. Windows SmartScreen may show a warning for new software. Click 'More info' → 'Run anyway'.

Verifying Download Integrity:

Each release includes a SHA-256 checksum. Verify your download matches the published hash to ensure file integrity and authenticity.

3. Interface Overview

The GhostLayer interface is divided into several key areas for easy document processing:

Main Panels:

Document Drop Zone: Drag and drop files here or click to browse. Supports PDF, DOCX, and TXT formats up to 50MB.

Original Text Panel (Left): Displays the original document content. Detected PII entities are highlighted.

Anonymized Text Panel (Right): Shows the anonymized version with placeholders replacing sensitive data.

Entity Inspector: Lists all detected entities with options to unmask specific items for the current session.

Prompt Library: Save and manage frequently used prompts for quick copy-paste with anonymized text.

Toolbar Actions:

- Process — Analyze the loaded document and generate anonymized output
- Copy to Clipboard — Copy the anonymized text for pasting into AI services
- Export as Markdown — Save the anonymized text as a .md file
- Clear — Remove the current document and reset the workspace
- Settings — Configure detection categories and application preferences

4. Step-by-Step Usage Instructions

4.1 Loading Documents

You can load documents into GhostLayer using any of these methods:

- Drag and drop a file directly onto the application window
- Click the drop zone and browse for a file
- Use the File menu → Open Document

Supported formats: PDF (.pdf), Word (.docx), and Plain Text (.txt). Maximum file size is 50MB.

4.2 Anonymization Process

Once a document is loaded, GhostLayer automatically analyzes the text using a three-stage pipeline:

Stage 1 — Memory Rules (Highest Priority): User-defined rules from the Learning System are applied first

Stage 2 — Regex Patterns: 58 built-in patterns detect structured data like emails, phone numbers, IDs

Stage 3 — NLP Models: Natasha (Russian) and SpaCy (English) detect names, organizations, locations

4.3 Using the Learning System

The Learning System is GhostLayer's killer feature. It remembers your corrections and applies them automatically in future documents:

1. If GhostLayer misses a term you want hidden, click on that word in the Original panel.
2. Select 'Remember Forever' to create a permanent rule.
3. The term will be automatically masked in all future documents.
4. All rules are stored locally with AES-256-GCM encryption.

4.4 Exporting Results

After anonymization, you have several export options:

- Copy to Clipboard: Instantly paste into ChatGPT, Claude, or other AI services
- Copy with Prompt: Combine your saved prompt template with the anonymized text
- Export as Markdown: Save as a .md file for documentation or later use

5. Data Types Detected

GhostLayer recognizes and masks the following categories of sensitive information:

- PERSON: Full or partial names that identify individuals
- EMAIL: Email addresses in standard formats
- PHONE: Phone numbers in various formats including international
- DATE: Dates of birth, event dates, etc.
- ORGANIZATION: Company names, institutions, agencies
- LOCATION: Cities, countries, addresses
- PASSPORT_RU/KZ: Russian and Kazakh passport numbers
- INN: Russian taxpayer identification numbers
- SNILS: Russian social insurance numbers
- CREDIT_CARD: Credit/debit card numbers
- IBAN: International bank account numbers
- IP_ADDRESS: IPv4 and IPv6 addresses
- URL: Website URLs and hyperlinks

Note: Detection uses NLP and pattern matching which is not 100% accurate. Always review the output before sharing.

6. Security & Privacy

Zero-Trust Architecture:

- 100% Offline — No network connections, ever
- RAM-Only Processing — Documents are processed in memory, never written to disk
- AES-256-GCM Encryption — All user rules are encrypted with military-grade encryption
- Machine-Bound Keys — Encryption keys are tied to your specific computer
- No Telemetry — Zero data collection or analytics

What Gets Stored:

- Document Content: NEVER stored — exists only in RAM during session
- Learning System Rules: Encrypted with AES-256, stored locally
- Prompt Templates: Stored locally (not encrypted, not sensitive)
- Encryption Key: Machine-bound, stored in application directory

Compliance:

- GDPR Compliant — No personal data collection
- 152-Φ3 Compliant — Data stays on user's device
- HIPAA Ready — Offline architecture supports healthcare workflows

7. Frequently Asked Questions

Q: Is my data sent anywhere?

A: No. GhostLayer works 100% offline. Your documents never leave your computer.

Q: Why does Windows show a security warning?

A: Windows SmartScreen warns about new software. Click 'More info' → 'Run anyway'. GhostLayer is safe and does not require administrator privileges.

Q: Can I use GhostLayer without installing it?

A: Yes. GhostLayer is portable — just extract the ZIP and run the .exe file.

Q: What happens to my Learning System rules if I reinstall Windows?

A: Rules are encrypted with a machine-specific key. After reinstalling, you'll need to recreate your rules as the encryption key will be different.

Q: Can GhostLayer detect custom terms specific to my company?

A: Yes! Use the Learning System. Click any term in the original text and select 'Remember Forever' to add it to your permanent rules.

Q: What's the difference between Free and Professional versions?

A: Free: Basic anonymization, rules reset each session. Professional: Persistent Learning System that remembers your rules forever, priority support.

8. Best Practices

ALWAYS REVIEW OUTPUT

Automated detection is not perfect. Review the anonymized text before sharing to ensure all sensitive data is masked.

USE THE LEARNING SYSTEM

Teach GhostLayer your specific terminology. The more rules you add, the more accurate it becomes.

PREFER TXT OR DOCX OVER PDF

PDF parsing can introduce formatting issues. For best results, convert PDFs to text or Word format first.

CLEAR CLIPBOARD AFTER USE

After pasting anonymized text into an AI service, clear your clipboard to prevent accidental exposure.

BACKUP YOUR RULES

While rules are encrypted, consider documenting important terms separately as a backup.

9. Contact & Support

Website: <https://ghostlayerapp.com>

Email Support: support@ghostlayerapp.com

Current Version: 1.0.0

Thank you for using GhostLayer!

If you have questions or suggestions, please reach out via email.