Viksit: AI-Powered Document Redaction
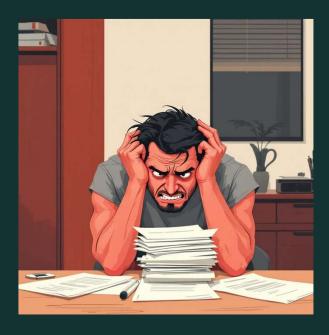
A "Trust by Design" Solution for Enterprise Privacy Protection

-by Team Viksit

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The High Cost of Hidden Data

Organizations face mounting pressure from GDPR, HIPAA, and compliance regulations to protect sensitive information. Yet traditional manual redaction creates significant barriers:

Slow & Expensive

Manual processes require thousands of man-hours and cause costly project delays

Error-Prone

Humans easily miss sensitive information in complex documents, creating massive compliance risks

Barrier to Progress

Fear of data leaks prevents safe document usage for research and legal discovery

The result: A fundamental lack of trust and transparency in data handling processes.

Meet Viksit: Intelligent Redaction

Viksit transforms manual redaction burdens into seamless, reliable workflows through intelligent automation and superior accuracy.

Our mission is to build **Trust by Design**, empowering organizations to protect privacy while safely unlocking their data's value.

Key Features That Set Us Apart

Hybrid AI Model

Combines OCR, Named Entity Recognition, and Object Detection for superior accuracy across all document types

Multi-Format Support

Processes PDFs, PNGs, and JPGs, including scanned files with handwritten notes and complex layouts

Intuitive Interface

Simple drag-and-drop functionality with side-by-side comparison views for easy document review

Detailed Audit Trail

Generates comprehensive JSON logs of all redactions for complete compliance traceability

Enterprise Ready

Self-contained Flask application with Docker containerization for seamless deployment

Our Hybrid AI Engine: The Innovation Behind Trust

Our breakthrough parallel processing pipeline dramatically reduces errors through intelligent cross-validation:

01

Document Ingestion

Secure upload of PDF or image files through encrypted channels

02

Parallel Analysis

Textual Engine (OCR + NER) identifies PII/PHI while Visual Engine (YOLO) detects signatures and barcodes

03

Cross-Validation

Both engines cross-reference findings to confirm detections and eliminate false positives

04

Secure Output

Generate perfectly redacted documents with comprehensive audit logs

Built on Modern, Robust Technology

Backend Infrastructure

Python, Flask, Gunicorn for scalable, enterprise-grade performance

AI/ML Capabilities

spaCy, Pytesseract, pdf2image, Pillow for comprehensive document processing

User Experience

HTML, CSS, JavaScript delivered via Flask for intuitive interaction

DevOps Ready

Docker containerization for seamless deployment and scaling

Seamless User Experience

The user journey prioritizes simplicity without sacrificing powerful functionality:

1 Upload

Drag and drop documents into the secure web interface

2 Process

Single-click AI-powered redaction with real-time progress tracking

3 Review

Compare original and redacted documents side-by-side instantly

4 Download

Export secure files with comprehensive JSON audit logs

Enterprise Impact Across Industries

Healthcare Providers

Anonymize patient records for research while ensuring strict HIPAA compliance and accelerating medical discoveries

Legal Teams

Automate redaction during e-discovery processes, saving hundreds of billable hours and reducing litigation risks

Government Agencies

Protect citizen data when processing public records while maintaining transparency and accountability standards
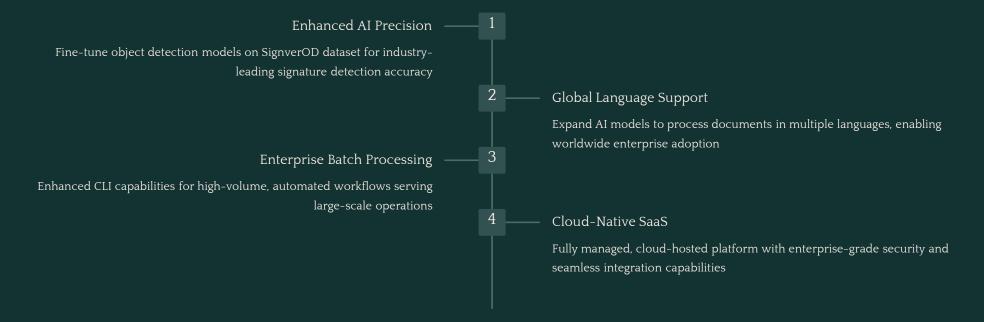
Financial Institutions

Secure client information in reports and forms while enabling data-driven insights and regulatory compliance

Impact: Viksit saves time, reduces compliance risk, and enables the safe, ethical use of sensitive data across enterprise workflows.

Our Vision for the Future

Enhanced AI Precision ——— 1

Fine-tune object detection models on SignverOD dataset for industry-leading signature detection accuracy

2 ——— Global Language Support

Expand AI models to process documents in multiple languages, enabling worldwide enterprise adoption

Enterprise Batch Processing ——— 3

Enhanced CLI capabilities for high-volume, automated workflows serving large-scale operations

4 ——— Cloud-Native SaaS

Fully managed, cloud-hosted platform with enterprise-grade security and seamless integration capabilities

Thank You

Questions?

Team Viksit:

- Arnav Majithia
- Ishan Rai
- Ritika Sinha
- Prince Agrahari

Explore Our Solution:

GitHub Repository

Hackathon Theme: Privacy – Trust by Design