LLM-based Assistant for GDPR Compliance in the Employment Relationships

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Introduction

Although uniform in legal force, the General Data Protection Regulation (GDPR) enforcement and interpretation can differ across Member States, which generates fragmentation and uncertainty. We propose Assist2GDPR, a Large Language Model (LLM)-based Assistant capable of analyzing all Data Protection Authorities' (DPA) decisions in order to support HR professionals, judges, Data Protection Officers (DPO), legal practitioners, and institutions, by means of aligning compliance strategies with prevailing interpretations. Furthermore, it would offer accessible insights for individuals, enhancing transparency and awareness of their rights in the workplace.

Assist2GDPR Use Cases

Our LLM-based assistant is designed to make GDPR enforcement decisions easy to understand for everyone, regardless of legal background. Complex legal decisions are reformulated into simple natural language summaries. Legal professionals can request a more detailed breakdown containing relevant GDPR articles, exact fine amounts and all of the corrective measures taken.

Users are able to interact naturally with the assistant and it also provides an automated summary of GDPR enforcement decisions. Assist2GDPR provides intuitive data visualisation and practical advice for its users. It is a chatbot that provides fast answers to real scenarios.

Assist2GDPR Architecture

User Interface works as a chatbot-style supporting both free-text questions and predefined form-based queries taking into account the users' preferences.

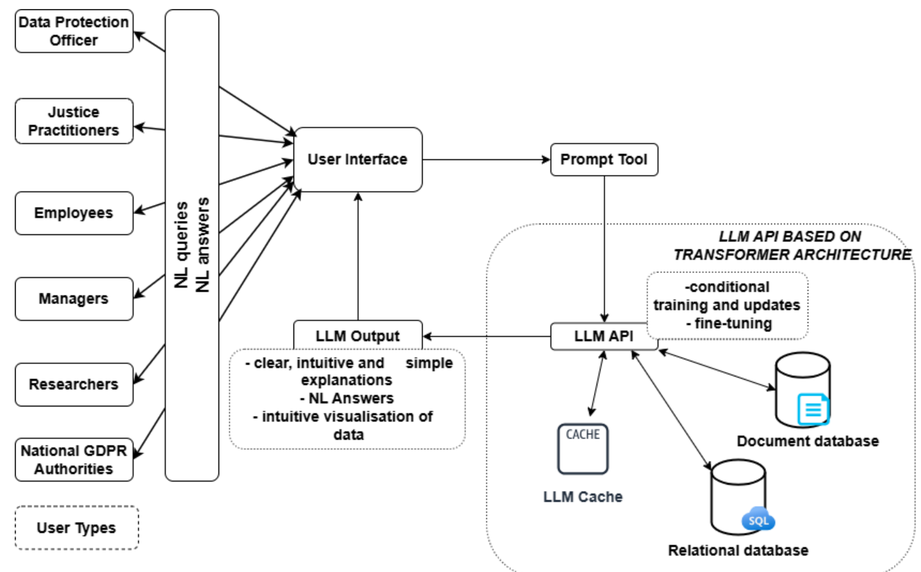

Figure 1. Assist2GDPR Architecture

Prompt Tool translates user queries into structured prompts optimized for LLM input. It adds role-specific and legal context to ensure highly relevant responses. The LLM API receives these prompts and first searches the LLM Cache. If no match is found, it processes documents and structured data from two databases. The LLM Cache improves efficiency by reducing response time and computation. Cached responses are tagged by query meaning and user role for fast reuse. The Document database stores GDPR enforcement decisions from EU countries (PDF/.txt) sourced from enforcementtracker.com. The Relational database holds structured case metadata (e.g., country, authority, date, sanction type), enabling filtering and analytics.

Future development

Assist2GDPR can be further developed by integrating automated document parsing (OCR and NLP) to extract structured information directly from PDF/TXT rulings. Further enhancements could include a multilingual search interface, real-time alerts for new decisions, user feedback loops to improve accuracy, and advanced analytics dashboards for legal professionals.

Eventually, the system could support proactive GDPR compliance checks, scenario-based risk simulations, and integration with national DPA APIs for live data access.

References

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