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TECHNOLOGIES AND INNOVATIONS

Privacy-Preserving Technologies

ENCRYPT innovates by prototyping scalable, practical and adaptable privacy preserving technologies. Our framework is designed to demonstrate how GDPR compliant data processing can be enhanced in cross-border, federated environments, enabling organizations to secure personal information effectively. With an emphasis on user accessibility, our proposed solutions support data protection, enable interoperability and secure data spaces across sectors.

Functionalities and Modules

ENCRYPT's functionalities prototype tools for privacy-preserving data management, including encryption, risk assessment, secure computation, and personalized recommendations, demonstrating how data governance and informed decision-making can be enhanced.

ENCRYPT INNOVATIONS

- **Fully Homomorphic Encryption**
  Enables computations on encrypted data without decryption, ensuring data remains secure during processing.
- **Trusted Execution Environment**
  Provides a secure processor area to protect data and computations from unauthorized access.
- **Differential Privacy**
  Adds controlled noise to data, enabling privacy in analytics.
- **Hybrid Protection Services**
  Combines encryption techniques for a versatile and secure data protection.
- **Hardware Acceleration**
  Optimizes processing speed for privacy-preserving tasks, making security measures faster and more efficient.
- **Pre-processing Tool**
  Prepares and sanitizes data for secure analysis, reducing risks of exposing sensitive information.
- **Recommendation System**
  Offers tailored privacy-preserving technology suggestions based on data sensitivity and security needs.
- **Knowledge Graphs**
  Creates interconnected data maps to enable contextual understanding and secure knowledge discovery.
- **Risk Assessment Tool**
  Evaluates potential data security risks, enabling proactive protection in data processing environments.

KEY TECHNOLOGIES

Fully Homomorphic Encryption

Trusted Execution Environment

Differential Privacy

PROJECT INFO

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