Opaque

Large amounts of data are unusable today because of privacy restrictions. Opaque unlocks the value of confidential data by securely enabling scalable analytics and ML on *encrypted* datasets.

Dataset from **Team A**

Dataset from **Team B**

Combined Encrypted Data

Insights

Insights

Benefits

Migrate confidential workloads to the cloud

- Accelerate your digital transformation by migrating confidential data & models to the cloud
- Apply advanced analytics and machine learning to encrypted data

Securely collaborate and share confidential data

- Enable data teams to collaborate over data silos, both within/across organizations, without exposing the data to anyone
- Enforce policies to retain control over data use

Comply with data privacy regulations

- Protect all PII / SHI / PHI data using advanced encryption, even during data processing
- Enforce policies to retain control over data useEnable compliance with global privacy laws and regulations (e.g. GDPR, CCPA)

CUTTING-EDGE TECHNOLOGY

Opaque leverages a novel combination of two key technologies—**secure hardware enclaves** and **cryptographic fortification**. This combination ensures that the overall computation is secure, fast, and scalable.

Using Opaque, data teams can analyze encrypted data that comes from one or more sources in the cloud while ensuring that the data is never exposed to anyone, obtaining unprecedented insights and unlocking new revenue streams.

Getting started: Check out the open source **MC² Platform on Github** that Opaque commercializes.

mc²

Opaque

Opaque Analytics

Process structured data securely using Spark SQL. Run SQL queries, complex analytics, and ETL pipelines on data loaded from encrypted CSV files.

Opaque Machine Learning

Securely train ML models over sensitive data, such as gradient boosted decision tree models using the XGBoost framework. Deploy trained models securely for classification and regression.

Opaque Federated

Reap the benefits of federated learning while significantly improving privacy guarantees via secure server-side aggregation of client updates.

SAMPLE USE CASES

- Credit Risk
- Anti-Money Laundering
- Provider Matching
- Loan Stacking
- Preventative Maintenance
- Transaction Fraud
- Behavioral Analysis
- Clinical Trials
- Privacy-based ad solutions
- Biotechnology
- Defense and security

FEATURES

1 Easy to use and deploy using a simple client application

2 Preserves the API of popular analytics and ML frameworks—run existing workloads without additional developer effort

3 Supported by major cloud providers

FOUNDING TEAM

Opaque is built upon years of peer-reviewed research by leading computer scientists at UC Berkeley

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PREVEIL

These in Secure Computation

databricks

Anyscale