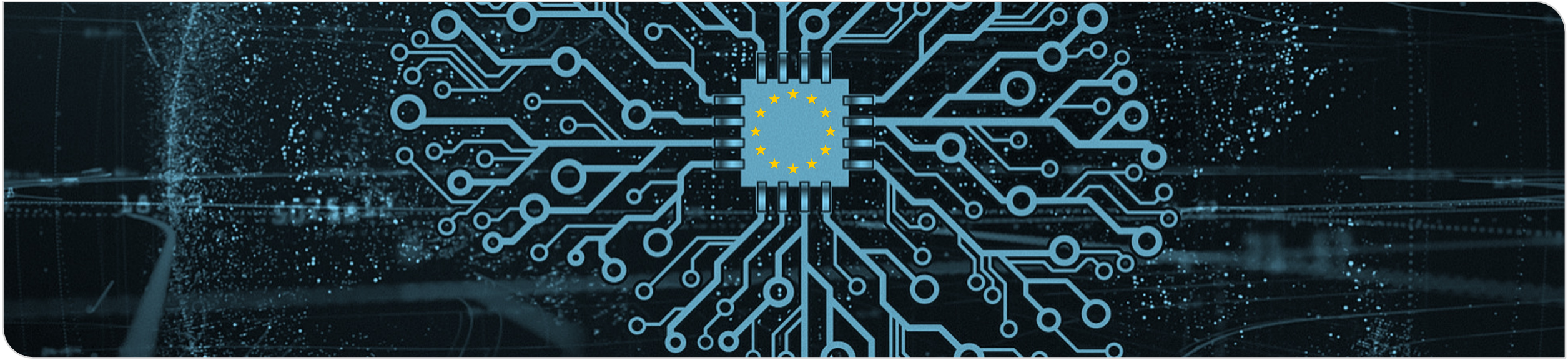
Karlsruhe Institute of Technology

Data Protection and Machine-Learning-Supported Decision-Making at the EU Border: ETIAS Profiling under scrutiny

Annual Privacy Forum 2022, 23–24 June, Warsaw, Poland



Authors

Paulina Jo Pesch

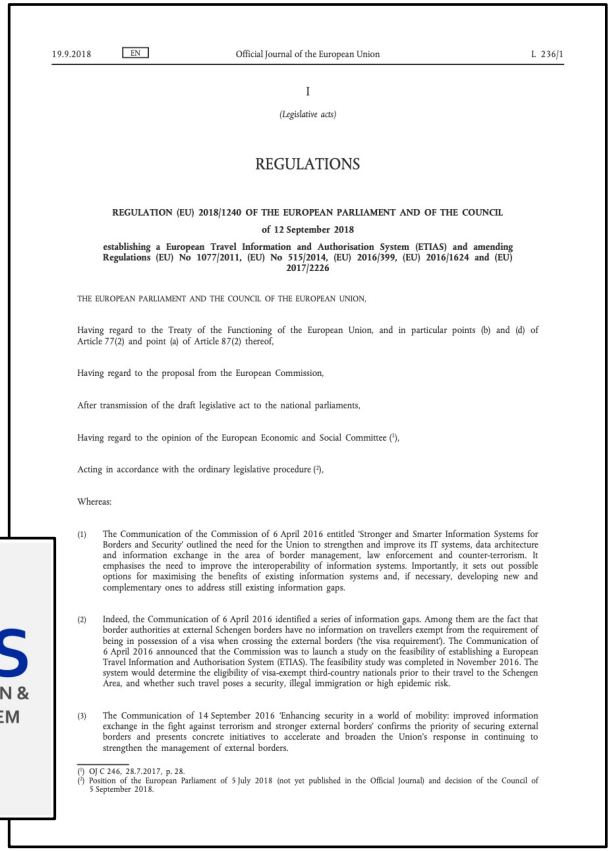
Diana Dimitrova

Franziska Boehm

ETIAS risk assessments

ETIAS European Travel Information and Authorisation System

Upcoming, largely automated IT system to **identify security, irregular migration or high epidemic risks** posed by visa-exempt visitors travelling to the Schengen Area, expected to be operational by end of 2022;
ETIAS travel authorisation requirement for visa-exempt non-EU nationals



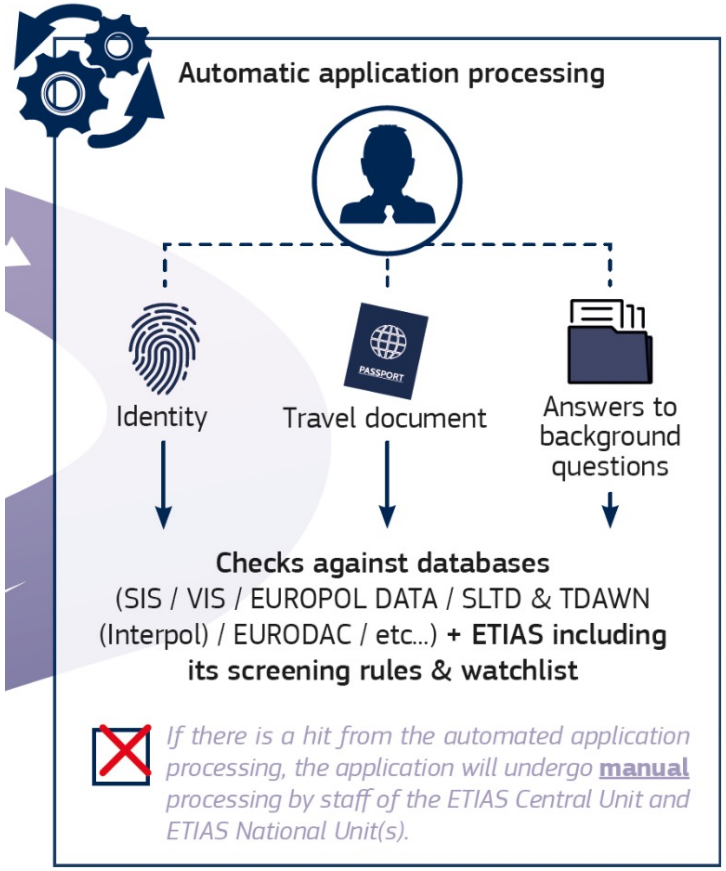
Regulation (EU) 2018/1240

ETIAS measures, Art. 33, 34

- Screening rules
- Watchlist

ETIAS risk assessment

ETIAS Electronic Travel Information and Authorisation System



Machine Learning (ML) use case

Image: ETIAS Factsheet, https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/smart-borders/etias_en

Fundamental rights impacts

The **refusal of a travel authorisation**, an **entry into the watchlist** and the underlying **data processing** raise concerns about fundamental rights, especially:

Private, family and professional lives Art. 7 CFREU, Art. 8 ECHR
Data protection Art. 8 CFREU
Non-discrimination Art. 21 CFREU, Art. 14 ECRH
Right to effective remedies Art. 47 CFREU, Art. 13 ECRH

Fundamental rights interferences require **adequate safeguards**.

Data protection requirements

Provisions applicable	*to the data processing by…*
Regulation (EU) 2018/1725 (**EUDPR**)	*Frontex (ETIAS Central Unit), eu-LISA*
Regulation (EU) 2017/679 (**GDPR**)	*ETIAS National Units*
Directive (EU) 2016/618 (**LED**)	*ETIAS National Units where data are processed to prevent/ detect/investigate terrorist offences or other serious offences*

The **AI Act Proposal**, as proposed by the Commission, is unlikely to apply to ETIAS risk assessments (Art. 83 (1) AI Act Proposal). However, its specifications of existing data protection requirements can provide guidance for the application of data protection requirements to ML.

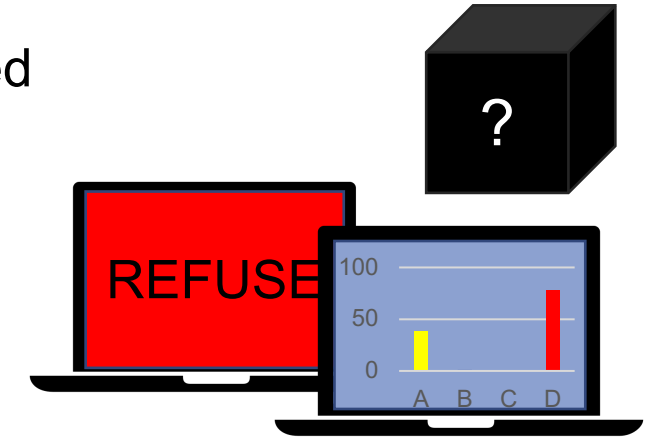
Data protection requirements

Human involvement:

Decisions that produce legal effects concerning or similarly significantly affect the data subject require meaningful (not merely formal) human involvement. Art. 24 EUDPR, Art. 22, GDPR, Art. 11, LED; wp251rev.01

Probabilistic measures and measures based on assumptions (such as risk assessments) require awareness of automation bias, and an understanding of the functioning and limitations of the processing and the accuracy of results. Cf. Art. 14 AI Act Proposal

Do we need **explainable AI (XAI)** to ensure human oversight over ML-trained models or are ”black boxes” sufficient? How should **results** be shown (eu-LISA “binary”or ”risk grading”)?



Is **human oversight possible at all**?

As a side note: In ETIAS, authorities might over-rely on **other authorities’ data** and misinterpret data entered by other Member States.

Data protection requirements

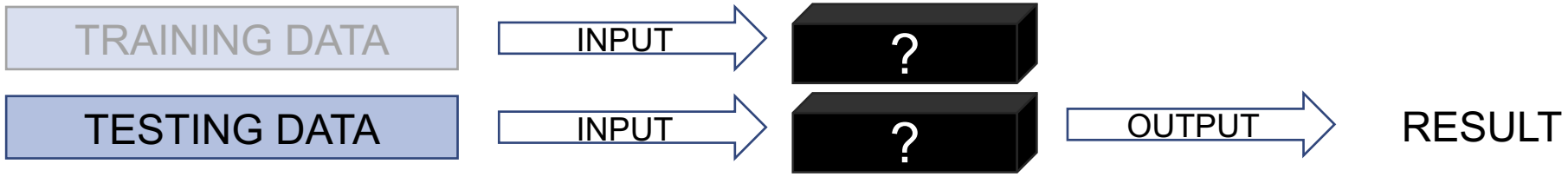
Accuracy and non-discrimination

Data must be accurate. Art. 4 (1) (d) EUDPR, Art. 5 (1) (d) GDPR, Art. 4 (1) (d) LED

Risk assessment models and criteria need to produce sufficiently accurate and non-discriminatory results, also against the background of purpose limitation. Art. 4 (1) (c) EUDPR, Art. 5 (1) (c) GDPR, Art. 4 (1) (c) LED

Accountability requires that the accuracy level is **measurable**. Art. 4 (2) EUDPR, Art. 5 (2) GDPR, Art. 4 (2) (c) LED; cf. Art. 15 (1–2) AI Act Proposal

For ML-trained models, training and testing is key.



Concerns: **Outsourcing and non-transparancy of training** and **lack of sufficient testing data/clear guidelines**

Conclusion and future work

ETIAS raises concerns under **data protection law and fundamental rights**.

As there remain many practical uncertainties, **the envisaged use of ML**-trained risk assessment models is problematic.

Future work: In-depth **fundamental rights** analysis, analysis of further **data protection requirements** and analysis of further **EU Border Control Measures** (in particular under the EU Interoperability Framework)

Thank you!

paulina.pesch@kit.edu

Research project INDIGO: Information in the EU‘s **Di**gitalized **Go**vernance

The project is financially supported by the NORFACE Joint Research Programme on Democratic Governance in a Turbulent Age and co-funded by AEI, AKA, DFG and FNR, and the European Commission through Horizon 2020 under grant agreement No 822166.

https://project-indigo.eu/

Data protection requirements

Rights to access to the decision-making logic

For “automated decision-making, including profiling”: Data controllers “at least in those cases” must provide data subjects with information about the logic involved. Art. 15 (2) (f) EUDPR, Art. 15 (1) (h) GDPR

The wording “at least in *those* cases” argues for the application of the provision to (some) **profiling measures that just support decisions**. For ETIAS risk assessments, their **fundamental rights impacts** argue for revealing the decision-making logic.

The purpose and intent of transparency requirements to improve the **knowledge balance between data controller and subject**, and to enable the data subject to assess compliance.

This requires: Enough information to understand **why and based on which data** a refusal of a travel authorisation or an entry into the watchlist have taken place, and which authorities have been involved.

For **ML-trained models**: Data fed into the model and result of the processing.

Data protection requirements

Supervision and enforcement

Multiple authorities involved are supervised by multiple supervisory authorities.

Co-ordinated supervision Art. 68 ETIAS Regulation

While co-ordinated supervision allows for common solutions, there is a **risk for the independence** of supervisory authorities.

Determining the responsible supervisory authority can be difficult (e.g. complaint by a data subject that has been denied a travel authorisation based on the ETIAS screening rules that are influenced by Europol, the Commission and Frontex).