Background

UCL

- UCL Computer Science
  - National AI Certification Service
  - AI Audit and Assurance
  - Piloting
- Publications
  - [Towards Algorithm Auditing](#)
  - [AI Standards [...] Through Experimentation](#)
  - [AI Audit in Financial Services](#) & [Recruitment](#)
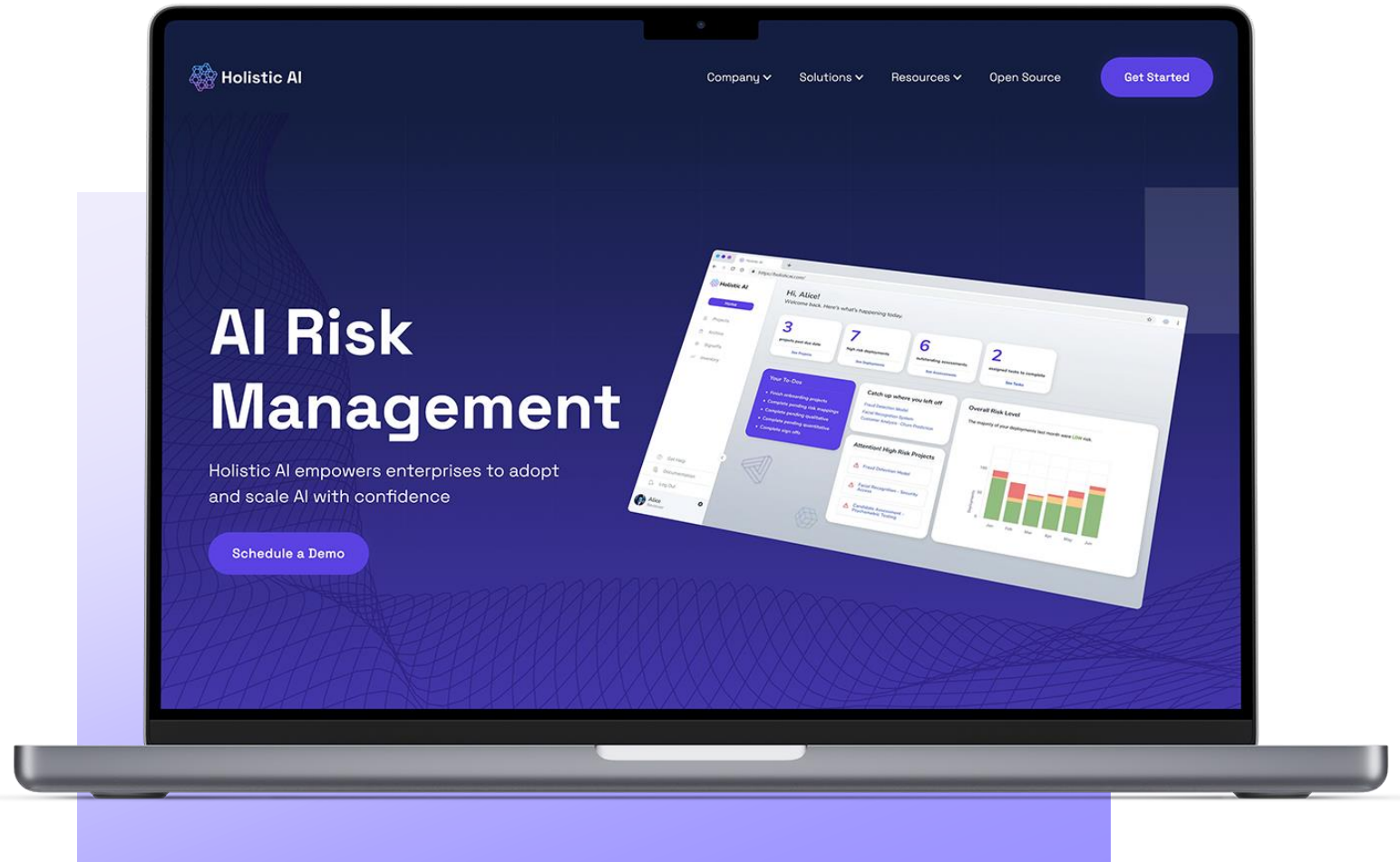 - Etc..
- Collaborations

The Alan Turing Institute

FCA FINANCIAL CONDUCT AUTHORITY

ico. Information Commissioner's Office

OECD.AI Policy Observatory

Holistic AI

From Harm to Regulation

Harm

- High profile harm

- Moral Panic?
  - Opportunity vs harms

Demand for Action

- 100+ Statements of Ethics

- Significant activity

Key Definitions

	Outputs Changes	Role of Humans	Automation	Technology
Information Commissioner's Office	-	-	Fully automated or with human in the loop	Algorithm-based technology
EU AI Act	Content, predictions, recommendations, or decisions	Can provide data and inputs	Elements of autonomy	Machine learning or logic- and knowledge-based approaches
OECD	Predictions, recommendations, or decisions	Define objectives	Varying levels of autonomy	Machine-based system
Canada's Artificial Intelligence and Data Act	Content, decisions, recommendation, or predictions	Human activity provides data	Autonomously or partly autonomously	Technological system that uses a genetic algorithm, neural network, machine learning, or other technique
California's proposed Amendments to employment regulations	Predictions, recommendations, or decisions	Define objectives	-	Machine learning system, where machine learning is an application of AI

Source: Lost in Transl(A)t(I)on: Differing Definitions of AI
https://www.holisticai.com/blog/comparing-definitions-of-ai

Some Concerns

Consistent Standards

- **Fundamental Principles**
- **Consistent Taxonomy for AI**
  - Widely accepted / shared
  - Ex. Consistent def. of AI (what falls in scope)
  - Ex. Life-cycle taxonomy
    - pre-dev., dev., deployed, monitoring

- **Generally Accepted Risk Framework**
  - Aggregated components
  - Source of risk
    - Bias, privacy, security, transparency …
- **Ex. Facial Recognition**
  - Customer on-boarding
  - School playground

Technical Capabilities for Compliance

AI Inventory management: scalable & actionable insights

Ongoing monitoring: real-time & automated

Testing: technical assessment & risk mitigation

Market monitoring: automated AI incident tracking

Validation and testing: of business documentation

AI auditing: supplementary to enforcement action

Regulation driving Innovation

- **Market Monitoring**
  - Very difficult
    - Ex. Fraud-detection; Anti-Money Laundering
- **Compliance by Design**
  - Mandate Design Principles
  - Require Validation to check
    - Internal/External audit
    - Conformity Assessments
- **Empiricism**
  - Reporting (Non-mandatory, incentivised through recognition (implicit accreditation)
  - Evidence **base**

- **Outcomes focused and risk-based enforcement**

- **Regulatory sandboxes and pilot projects**

- **Regulatory guidance** to promote AI adoption (**ex. Mandate third-party** auditing etc.)

Holistic AI

Thanks

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