Dispelling confusion:
Nurturing reliable innovation through ethical data practices

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Innovation and ethics

We need to have a well-rounded approach that considers both innovation and moral concerns

The first step is creating a culture where people take responsibility for **handling data properly**.

This involves being **transparent** about how data is used and making sure people agree to it. Balancing the usefulness of technology with protecting people's privacy is really important. Data **quality** reduces algorithmic bias.

Need for **fair and unbiased** computer programs to avoid discriminating against certain groups. It suggests having guidelines that make sure new technologies are developed and used **ethically**, with ways for people to address any unintended problems.

As technology keeps changing, ongoing **conversations** involving different groups, like tech experts, ethicists, policymakers, and the public, are crucial.

The goal is to create ethical guidelines that match our societal values and make sure we use data and technology responsibly.

Ethical technology

Healthcare

AI in diagnostics and treatment raises concerns about data privacy, consent, linkage error, potential algorithmic bias affecting marginalized communities

Finance

The use of AI for automated decision-making in lending and investment may pose ethical challenges, including issues related to fairness, transparency, and potential socioeconomic biases

Public perception and customer involvement

Multifaceted views on AI encompass a blend of enthusiasm and curiosity for its benefits, such as increased efficiency in healthcare, finance, and entertainment, coupled with apprehension over privacy and ethical concerns, including worries about potential misuse of personal information and questions regarding accountability, bias, and transparency in AI algorithms

Data linkage error: Healthcare

Challenges

Ethnic minorities face difficulties in data linkage due to poor data quality, naming conventions, lower healthcare engagement, and potential discrimination

Biased estimates of readmission

This leads to biased estimates as healthier ethnic minorities are more likely to successfully link

Impact on care quality metrics

Not linking impacts readmission rates, a vital care quality indicator, as the event receives a new ID

Addressing the issue

Improve data quality and promote equitable healthcare engagement to mitigate bias and enhance algorithmic fairness

Bias and data quality: Example

- Data quality prevent linkage of hospital records in England
- Readmission rates are under-estimated if records do not link

Missed matches by ethnic group

- Missing 10.4%
- White 6.8%
- Mixed 3.7%
- Asian 7.0%
- Black 7.0%
- Chinese/Other 11.7%

Under-estimation of readmission rates (vs. White group)

- Missing 0.52
- Mixed 0.96
- Asian 0.98
- Black 0.78
- Chinese/Other 0.73

Hagger-Johnson et al. (2017, *Journal of Innovation in Health Informatics*)

Ethical data-driven decision making

Integration and bias awareness

- Geographical data integrated for individual credit risk assessments
- Raises awareness of potential biases, especially in areas with ethnic minority populations

Pivotal importance of addressing concerns

- Crucial to address concerns for fairness in credit assessments
- Priority in preventing discriminatory outcomes and reinforcing social disparities

Balancing act with ethical oversight

- Emphasizes the need for ethical guidelines and oversight
- Highlights the importance of maintaining balance, particularly in data applications

Challenges in decision making

- Geographic location impacting lending decisions, posing challenges
- Overlapping factors of location and ethnicity may lead to biased outcomes

Algorithmic bias in lending and ethnicity

Redlining

- Treating applicants with identical observed risk factors differently on the basis of race or ethnicity (illegal since 1968)
- Lenders in 2019 were more likely to deny home loans to ethnic minorities with similar financial characteristics
- Traditional branches not placed in ethnic minority neighbourhoods
- Zero hours contracts and part-time work more likely among minorities, income seems riskier

Recent study

- Group differences in risk profiles drive disparities (credit score, income, type of work)
- Bias persists at the human overlay stage
- Poor service or over-ride based on 'verification', 'incomplete application' or other data quality concerns

This shows that **both** algorithmic bias and human overlay drive inequalities in lending by ethnicity

AP News (2021). The secret bias hidden in mortgage-approval algorithms

[How We Investigated Racial Disparities in Federal Mortgage Data – The Markup](#)

Holding 17 variables constant among 2 million mortgage applications for home purchases reported to the government,

Compared to similar white applicants, lenders were:

- 80% more likely to reject Black applicants
- 70% more likely to reject Native Americans
- 50% more likely to reject Asian/Pacific Islanders
- 40% more likely to reject Latino applicants

Public and consumer perspectives on intelligent technologies

Multifaceted views

- Blend of enthusiasm, curiosity, and apprehension

Excitement for benefits

- Potential advantages include increased efficiency, improved convenience, and enhanced personalization
- Appreciation for AI-driven innovations in healthcare, finance, entertainment

Concerns on privacy and ethics

- Concurrent worry about privacy and ethical implications
- Increasing awareness of the data-driven nature of AI

Key concerns

- Worries about potential misuse of personal information
- Questions on accountability, bias, and transparency in AI algorithms

Ethics committees: Include customers?

Medicine, current practice

- Inclusion of patients/laypeople in medical ethics committees is a common and accepted practice
- Ensures diverse perspectives, patient-centered approach, and real-life implications in ethical decision-making

Financial firms' consideration

- Similar inclusion of customers (and other stakeholders) in ethics committees for financial firms could enhance decision-making and align with end-users' interests

Include customers in ethics panels

- In medicine, the inclusion of patients in ethics committees is an established practice, providing valuable insights and perspectives
- Applying a similar approach in financial firms could enhance ethical considerations

'As the number of ethical consumers increases, they tend to lean towards businesses that commit to using AI responsibly and clearly explain how their AI technology affects society'

[AI's Impact On The Future Of Consumer Behavior And Expectations (forbes.com)](forbes.com)

Restoring confidence in data technologies

Foundations of trust

- Transparent, accountable data practices for user understanding
- Enhance data acquisition and insights amidst privacy concerns

Cybersecurity priority

- Implement robust measures against breaches, ensuring user trust

Ethical guidance

- Ethical considerations for fair insights, addressing bias

Communication & collaboration

- Open communication among stakeholders, bridging understanding gaps

Human-centered AI

- Prioritises wellbeing and human design needs

Artificial intelligence principles

**Safe**. Data protection, governance, regulation and security first. AI on mighty foundations

INTEGRITY

Explainable: We know how algorithms running on our data work and can explain them to customers, colleagues and regulators. Data and AI literacy training is provided to colleagues
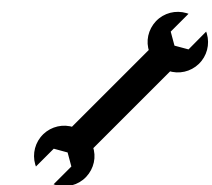
Fair: Consented, free of bias and non-discriminatory, supported by regular test evidence. Customers can opt out. ESG implications are considered
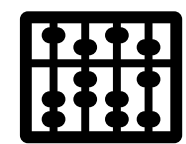
Simple: 'As simple as possible, but not simpler'

Innovative. AI is deployed to support business strategy and decisions, not to follow fad or fashion. Big, actionable, purposeful insights that drive incremental revenue
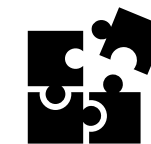
Maintained: We retrain algorithms at least annually, on latest data, with checks at least quarterly

RESPONSIBILITY

Human-centric. In design, we consider customer needs, ethical debates and engages with contemporary thinking

Allied: We deploy the right expertise, both in-house and with 10x allies. Agreements in place with partners

Algorithmovigilant: Intense scrutiny of performance drift, scope creep, data hallucinations and other problematic developments. Oddities are examined and fixed
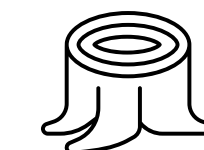
Auditable. Transparency in inputs, algorithms, outputs, usage logs - with strict version control and high documentation standards
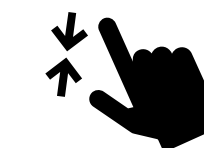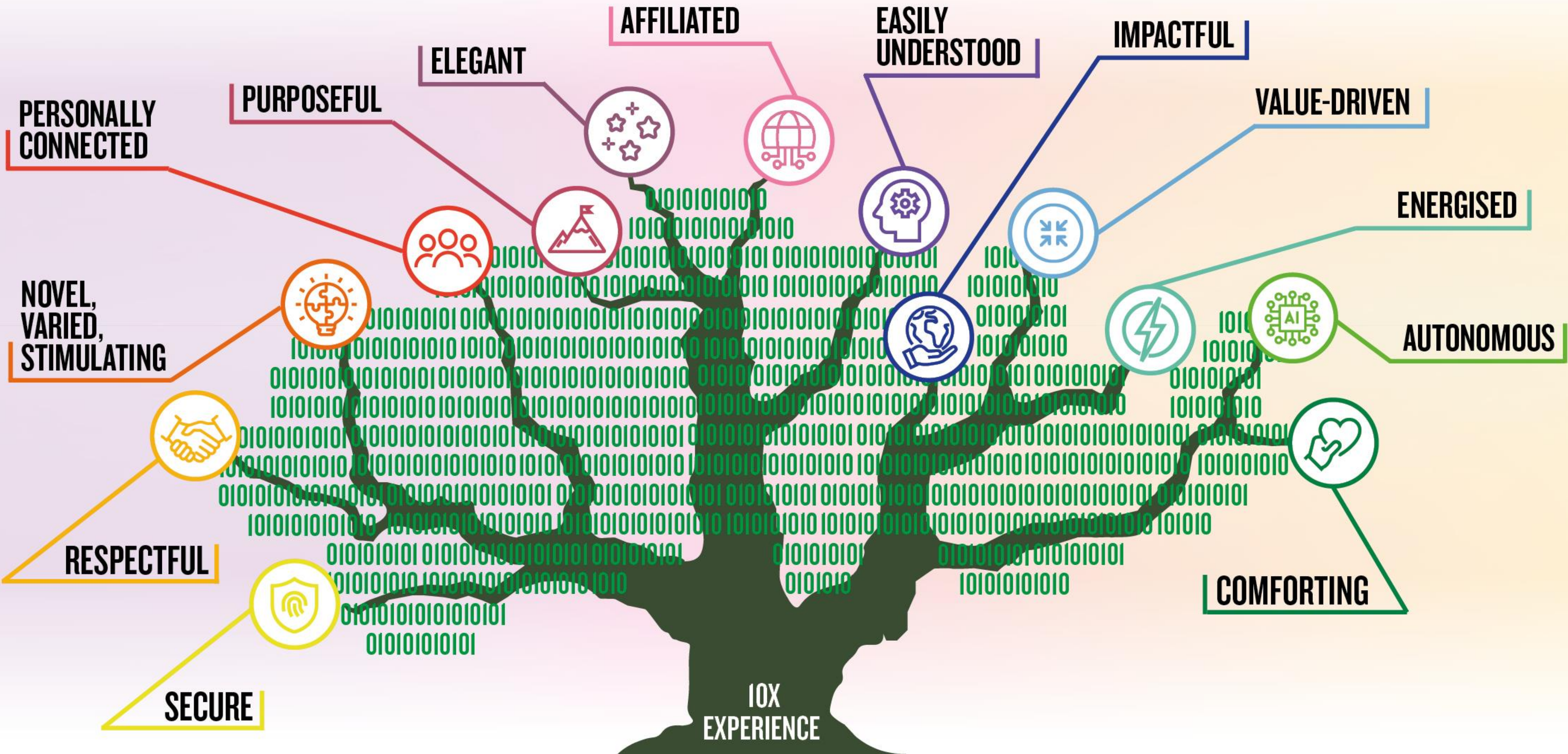
Protective. We spotlight and study the impact of AI on the extraordinary outliers, the vulnerable and minority groups

Ethically obtained insights drive impactful strategies

Alignment with societal values

- Ethically sourced insights ensure that knowledge gained aligns with values

Trust-building through transparency

- Adherence to transparent and responsible data acquisition practices builds trust among stakeholders
- Trust becomes a catalyst for the adoption and acceptance of innovation

Inclusivity and fairness

- Insights contribute to technologies that are inclusive, fair, and responsive

Mitigating biases for social good

- Ethical principles in data utilization mitigate potential biases, promoting social good

Integration of ethical principles throughout the data lifecycle drives the creation of impactful strategies and technologies, resonating with broader societal ethical expectations.

Restoring confidence

Restoring confidence in data technologies after data breaches is a complex process that requires a combination of technical, organizational, and communication strategies.

Rebuilding trust with customers involves demonstrating a commitment to data security, transparency, and ethical use of data.

- Notify customers transparently about breach and actions taken
- Thoroughly investigate, remediate, prevent future incidents
- Ensure compliance with data protection regulations and industry standards
- Implement security measures and regularly update systems
- Conduct third-party security audits, sharing results for credibility
- Educate customers and employees on security best practices

Customer centric behaviour

- Establish a dedicated support channel for customer concerns
- Communicate data collection processes and obtain consent
- Offer compensation or redress for affected customers
- Demonstrate commitment to improvement in data security
- Rebuild trust by engaging with customers, regulators, and stakeholders
- Craft a consistent and empathetic public relations strategy

By combining technical measures with transparent communication and a commitment to continuous improvement, you can work towards restoring confidence in data technologies and enhancing data acquisition and insights for your customers.

How ethics drives strategy

Ethically obtained insights play a crucial role in driving impactful strategies and technologies, particularly when aligned with value-driven strategies, **ESG** (Environmental, Social, and Governance) considerations, and AI/analytics strategies.

- Ethical data practices build **trust** with stakeholders, fostering support for organizational strategies
- ESG principles guide **ethical** considerations, aligning strategies with sustainable practices for long-term impact
- Ethical data acquisition respects customer **privacy**, driving loyalty through tailored strategies
- Proactive **risk management** through ethical insights prevents data misuse, regulatory issues, and negative perceptions
- Ethical insights ensure **compliance** with data protection, minimizing legal challenges and associated penalties
- Ethical insights inform strategy **adaptation** and execution, keeping organizations relevant to evolving customer and societal expectations

Ethically obtained insights are foundational to the success of impactful strategies, especially when considering value-driven approaches, ESG principles, and AI/analytics strategies.

Ethics in financial services

Stakeholder satisfaction

- Firms operate within a broader ecosystem, relying on customer, stakeholder, and regulatory support
- Upholding ethical values such as integrity, fairness, respect, and openness

Vital role of ethical business practices

- Ethical business practices and robust governance are essential for sustained success
- They establish a foundation for trust, accountability, and long-term relationships

Mitigating algorithmic and data bias

- Proactively addressing algorithmic and data bias is crucial
- Ethical considerations should guide the development and deployment of algorithms to ensure fairness and prevent unintended consequences

Incorporating ethics into governance and risk frameworks

- Governance and risk frameworks must adapt to the integration of AI
- This includes proactive consideration of ethical dimensions to align technology usage with ethical standards and legal compliance

Ethics in Banking and Finance

Exploring the law and regulation which underpins ethical behaviours of firms and individuals operating in the financial services sector.

Linklaters and UK Finance:
Ethics in Banking and Finance (2019)

Digital trust and the customer

Place trust at heart of data strategy (Deloitte, 2023)

Digital trust = **10% annual growth** in profits (McKinsey, 2022)

Data transparency

- Show benefits to customers outweigh benefits to firm
- Strong communications strategy

Customer autonomy

- Offer enhanced control over data
- Choose level of personalization

Brand trustworthiness

- Take stance on ESG
- Show how customer data has improved products/services

[Digital ethics and banking: A strong AI strategy starts with customer trust (deloitte.com)](deloitte.com)

[Digital trust: Why it matters for businesses | McKinsey]

Summary

- Handle data properly and improve data quality
- Evaluate algorithmic bias and biased human overlay
- Create an ethics panel including customers
- Adopt human-centric AI design principles
- Communicate intentions with customers and regulators
- Include digital trust in your data strategy