What if personal algorithms let us control our digital experiences?

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My Algorithm

Within Reach   **Transitional**   Visionary

A personal quantum-secured algorithm empowers individuals to selectively activate or deactivate data exchange across platforms, enabling transparent and regulated digital experiences around the world and changing the way we manage our data and engage in the digital economy.
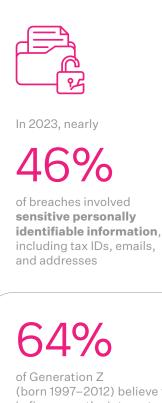
UNCERTAINTIES
Systems, Technology

MEGATREND (Most significant)
Digital Realities

TRENDS
Advanced Connectivity
Cross-Sectoral Partnerships
Cybersecurity
Digital Economy
Interoperability

TECHNOLOGIES
Artificial Intelligence
Quantum Technologies

SECTORS IMPACTED
Art, Media, Sports & Entertainment
Communication Technologies & Systems
Consumer Goods, Services & Retail
Cyber & Information Security
Data Science, AI & Machine Learning
Digital Goods & Services
Education
Immersive Technologies

KEYWORDS
Algorithms
Avatar
Encryption
Privacy
Quantum Computing

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64%

of Generation Z (born 1997–2012) believe that in five years the internet will be so predictive that it will determine their daily activities

WHY IT MATTERS TODAY

Concerns about data privacy are increasingly varied. When shopping online, at least half of consumers are concerned about security, and nearly one in four report that they have been targeted by a scam.[883] In addition, 94% of organisations say their customers will not buy from them if data are not properly protected.[884] Nevertheless, awareness of algorithms influencing behaviour (algorithmic persuasion) does not lead to better privacy protection. A study in the Netherlands found that while just under 40% of social media users are aware of algorithmic persuasion but are not critical of it, 18% have very little awareness and coping ability.[885] Additionally, approximately 28% of users feel they can't do anything about it.[886] Empowered consumers – those who are both aware and critical of algorithmic persuasion – make up the smallest group (just under 15%).[887]

There is a growing demand for personalisation.[888] The preference for personalisation is higher among consumers aged 35–44 years (87%) and 45–54 years (87%).[889] However, 41% of Generation Z (born 1997–2012[890]) users would sacrifice privacy or leave a website if it does not anticipate their needs or preferences.[891] Sixty-four per cent of this generation believe that in five years the internet will be so predictive that it will determine their daily activities,[892] and 66% believe that all websites will eventually communicate with one another, resulting in a personalised experience throughout the web as well as across applications and appliances.[893]

In 2023, nearly 46% of breaches involved sensitive personally identifiable information, including tax IDs, emails, and addresses.[894] The cost of public cloud breaches averaged $5.17 million each – a 13% rise since 2022.[895] Beyond their financial impact, such breaches cause significant stress for victims.[896] As advanced machine intelligence and associated algorithms become widespread, opting in or out of data sharing or training may become impractical.

A personal algorithm enables **secure and transparent interactions with personalised preferences across platforms**

THE OPPORTUNITY

Drawing parallels with Estonia's X-Road Initiative[897] designed for individuals, a personal algorithm, secured by quantum computing, functions as an algorithm-to-algorithm communication layer, seamlessly managing interactions across platforms. Encrypting all exchanges and maintaining detailed access logs, it provides users with complete visibility into how, where and which part of their data are used as well as which algorithmic systems are active at any given time.

Interfacing seamlessly with other systems, the personal algorithm enables secure and transparent interactions with personalised preferences across platforms. Supported by an interoperability framework regulated across jurisdictions, a personal algorithm empowers users to take control of their data and interactions.

BENEFITS

Secure, transparent and user-centric digital future; personal agency in data and digital experiences; aligning of algorithm regulatory requirements across jurisdictions.

RISKS

Complexity in implementation and regulation; cybersecurity; interoperability challenges; potential negative impacts on the user experience.