Fundamentals of Data-manipulating Privacy Enhancing Technologies

Course Objectives

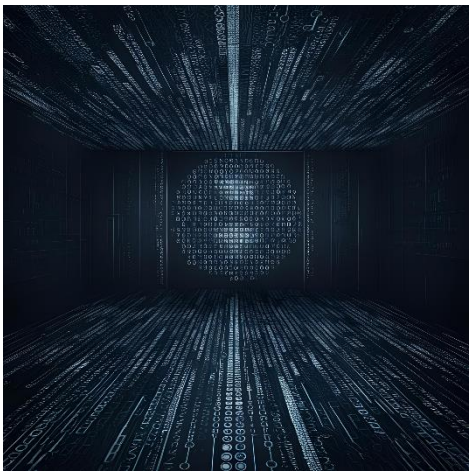
Privacy Enhancing Technologies (PETs) comprise a long-standing and wide-ranging field of research, technologies, and solutions, which seek to address core data protection concepts such as online privacy, data protection by design, data minimisation and data security. In parallel, they aim to realise and unlock the value of data within the limits of applicable laws and regulations.

This course provides a comprehensive overview of commonly discussed modern PETs which operate on data directly, in the context of organisations applying such technologies to process personal data (a companion course addresses PETs which use cryptographic principles to protect data). It introduces the concepts at an easily understandable level, compares their pros and cons against other PETs, and raises known issues and limitations. The course includes several exercises and demonstrations aimed at strengthening participants' understanding. As it is targeted at decision makers, managers, and system designers, it does not require advanced knowledge of mathematics nor programming skills.

This course complements our Fundamentals of Cryptographic Privacy Enhancing Technologies course on other types of PETs.

Who should attend?

- Privacy Engineers, Technical Staff, Developers, Data Analysts, Data Architects, and Project Managers
- Data Protection Officers (DPOs), Compliance Professionals, and Corporate / In-house Counsels
- Executives, Managers, and Staff involved in the management, collection, use or other processing of personal data



Course Details

Course Code: PE102

Title: Fundamentals of Data-manipulating Privacy Enhancing Technologies

Duration: ½ day (approximately 3.5 contact hours)

Mode of Training: In-person

Venue: Drew & Napier LLC
10 Collyer Quay, 10th Floor, Ocean Financial Centre
Singapore 049315

Course Fee: S$300.00 (excluding GST)

To view available dates and register for this course, please click here. You may view all available courses and our course schedule(s) on our Academy webpage (https://www.drewnapier.com/Academy).

Course Outline

- **Context for Data-oriented PETs**
  - Purpose and scope of PETs
  - Regulatory requirements and general guidance on PETs
  - PETs versus related data protection technologies (like anonymisation)

- **Modern PETs for data protection**
  - Private set intersection
  - Differential privacy
  - Fake / Mock / Fictitious data versus Artificial Intelligence (AI) based synthetic data

Course Facilitator

Albert Pichlmaier is Senior Learning Technology Designer with Drew Academy and concurrently Senior Cybersecurity & Privacy Engineer with Drew & Napier's Data Protection, Privacy & Cybersecurity practice. He holds a degree in Computer Science from a German tertiary institution. He is a Certified Information Systems Security Professional (CISSP), a Certified Data Privacy Solutions Engineer (CDPSE), a holder of the Singapore WSQ Advanced Certificate in Learning and Performance (ACLP), and a certified Blockchain Developer. Albert is credited as an inventor of two patents granted in Germany and other countries. His technical expertise covers a wide-ranging area of matters involving Cybersecurity, Privacy Engineering, Cryptography, Quantum Computing, Artificial Intelligence / Machine Learning, Blockchain Development, Data Analytics, Big Data, and Data Visualisation. For the courses and webinars under the Drew Academy, he draws from this pool of knowledge and experience to explain technical content to non-technical audiences, develop proof-of-concept and learning tools, and engage with experts on finer details.

Albert was formerly an Executive Manager with the Personal Data Protection Commission (PDPC), where he was involved in technology assessments for data breach investigations, research into trending / disruptive technologies and advising on technical aspects of various PDPC guidelines and publications (amongst other matters). Prior to his role with the PDPC, Albert worked in technology-related organisations in the private and public sector in Germany, Spain, and Singapore. He was also a technopreneur, having set up a company to provide testing tools for embedded systems and smartcard applications.