

NTU Singapore leverages AI and machine learning to fight money laundering

A multi-disciplinary team from Nanyang Technological University, Singapore (NTU Singapore) is embarking on a research project to develop new capabilities so the wealth management industry can better combat money laundering practices through the use of artificial intelligence (AI) and machine learning.

Supported by the Monetary Authority of Singapore's (MAS) Artificial Intelligence and Data Analytics Grant under the Financial Sector Development Fund, the project seeks to develop an advanced paradigm on the interrelationship between money laundering and the variable factors around potential perpetrators and their transactions. This will enable institutions to detect unusual money flows or transactions that might be signs of money laundering.

The NTU team consisting of experts from its Wealth Management Institute (WMI), School of Computer Science and Engineering (SCSE) and Data Science and Artificial Intelligence Research Centre (DSAIR), is also seeking to create an innovative technological prototype that can facilitate real-time intelligence sharing among institutions.

As Asia-Pacific's wealth management industry is projected to have a record US\$42 trillion worth of high net worth individuals (HNWIs) by 2025 ([Capgemini's 2018 Asia-Pacific Wealth Report](#)), the deployment of such state-of-the-art technologies and data analytics capabilities will help to address the corresponding rise in money laundering risks for the region.

The research is also backed by UBS that has provided seed funding. UBS is also pioneering the research with WMI in finding new and practical ways for wealth management institutions to fight against anti-money laundering (AML) risks more effectively by applying AI and machine learning techniques.

In conjunction with the scientific research, WMI will organise forums and dialogues from the third quarter of 2019 to share the research findings in stages.

WMI Chief Executive Officer Ms Foo Mee Har said, "With new technological advances and paradigms, the tools available to money laundering perpetrators may disrupt the financial institutions' existing AML mechanisms. This collaboration with NTU researchers and experts who are at the forefront of advanced AI and machine learning technologies presents a win-win solution for everyone involved. With firm support from MAS and the industry for this project, I am confident that we will be able to enhance the industry's AML capabilities and knowledge."

An expert panel and working committee, comprising industry leaders and experts from leading financial institutions and regulators will provide strategic guidance to the project. They include:

- Mabel Ha, Managing Director and Regional Head of Financial Crime Prevention APAC, Compliance & Operational Risk Control of UBS AG (Expert Panel Chairperson);
- Andrew Barker, Director, APAC Lead, Systems & Innovation, Financial Crime Prevention of UBS AG;
- Eric Ang, Head of Compliance Analytics & Insights, Group Compliance of UOB Limited;
- Harsh Narula, Group Head, Platform, Analytics & Surveillance Operations, Legal & Compliance of DBS Bank;
- Ian Wong, Deputy Director, Financial Investigation Group of the Commercial Affairs Department;
- Lam Chee Kin, Managing Director and Head, Group Legal, Compliance & Secretariat of DBS Bank;
- Dr Li Xuchun, Deputy Director & Head, Supervisory Technology Office, Data Analytics Group of MAS; and
- Loretta Yuen, General Counsel, Group Legal & Regulatory Compliance of OCBC Bank.

Ms Mabel Ha, Managing Director and Regional Head of Financial Crime Prevention APAC, Compliance & Operational Risk Control of UBS AG said, "Many banks have been applying the same concepts in system-based AML Transaction Monitoring for years, that generate a high number of false positives. Within this project we want to seek new and practical ways for wealth management institutions to apply AI and machine learning techniques to achieve superior results. With our distinguished panel of experts, the project will have access to deep knowhow of customer and transactional data maintained by banks, and AML risks faced in the banking industry. Through the chairperson role, UBS looks forward to contributing our insights from being the largest wealth manager in APAC".

This research study follows the introduction of the WMI AML Risk Management Online Training Series, an accredited AML online programme launched in April 2018 with sponsorship from UBS, which has seen healthy levels of sign-ups across the industry. The online programme is open to all industry practitioners and individuals interested to gain proficiency on AML and Countering the Financing of Terrorism issues.

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Media contact:

Feisal Abdul Rahman
 Senior Assistant Director
 Corporate Communications Office
 Nanyang Technological University
 Email: feisalar(at)ntu.edu.sg