MEDIA RELEASE

Singapore Management University and Tradeteq to develop quantum computing credit scoring for trade finance

27 April 2020 (Monday) - Singapore Management University (SMU) and Tradeteq will be embarking on a project "Exploring the Advantages of a Quantum System for Machine Learning applied to Credit Scoring", which aims to develop quantum computing-based credit scoring methods for companies. This project is supported by the Monetary Authority of Singapore under the Financial Sector Technology & Innovation (FSTI) – Artificial Intelligence and Data Analytics (AIDA) Grant Scheme.

SMU and Tradeteq's objective for the project is to build a predictive machine learning model which has the potential to improve credit scoring accuracy. The model will be implemented on both a quantum computer and a simulated quantum computer.

Quantum computers enable the processing of multiple pieces of data at the same time by using the unknown quantum state of very small particles, rather than the classical use of transistors, as the basis of computing. This may sometimes lead to far quicker processing times over standard classical machines.

The project will enable SMU and Tradeteq to develop quantum neural network algorithms and research optimal configurations of artificial neurons. This may eventually enable quicker credit assessment taking into account growing volume and variety of data that flows in Tradeteq systems.

Tradeteq currently uses AI to provide accurate and up-to-date credit scores to SMEs who would not normally be able to access financing. Through this collaboration, Tradeteq will be improving their long-term capabilities and stay at the cutting edge of global AI research for financial applications.

Faculty from SMU School of Information Systems has experience in quantum devices and the application of disruptive technologies to financial technologies. This collaboration will further the research of applying quantum computing to real problems in industry.

This project will use quantum algorithms, which cannot be implemented on today's classical machines. SMU's and Tradeteq's work may be the first to show a practical quantum advantage for a financial application. The results may be the first beacon of business advantages for the financial industry as quantum computing continues to improve.

Tradeteq's credit scoring algorithms are already being used on the Singapore's Networked Trade Platform and this partnership furthers Tradeteq's strength and presence in the region.

Michael Boguslavsky, Head of AI at Tradeteq comments: "Tradeteq's AI credit scoring capabilities are already industry leading and this project we are embarking on with SMU is going to further develop our technology. We are exploring the development of quantum-based neural networks to more quickly and more accurately give credit scores to SMEs and transactions, allowing them access to trade finance which, under normal credit reporting, would not have been possible. Quantum computing is set to be a gamechanger for many sectors, and we're excited to be leading the charge for trade finance."

Professor Pang Hwee Hwa, Dean of SMU School of Information Systems, comments: "This grant will strengthen our research in applying cutting edge technologies and enable us to work with Tradeteq to develop the next generation of credit scoring networks. Currently, many small-and-medium-sized businesses are unable to grow their companies due to a lack of funding as they are deemed 'too risky' by current credit rating models. With shorter processing time, more businesses could be scored and with greater accuracy thereby creating more trusts and providing greater access to finance for companies than ever before."

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About Tradeteq

Tradeteq is the leading provider of data, technology and software to the trade finance industry. Founded in London in 2016, Tradeteq is building the infrastructure to power trade finance investments and help transform trade finance into an efficient, transparent, and global financial market.

Tradeteq's team delivers deep cross-disciplined knowledge together with client focus and understanding. Our digital platform enables us to be a true innovation partner to our clients, significantly accelerating their pace of technology adoption while reducing complexity and costs.

Tradeteq is the official technology partner of the Trade Finance Distribution Initiative (www.tradefinancedistribution.com), the only industry-led group that sets the standards for global trade finance distribution.

For more information, please visit: https://www.tradeteq.com

About the SMU School of Information Systems

Real-world industry sectors provide our School of Information Systems (SIS) with a testbed and laboratory for experimentation, as well as a fertile breeding ground for new ideas. Our faculty and students apply their research results to solve real problems in a variety of industry settings and to create IT applications and systems. At the same time, our faculty actively publish in top-quality Computer Science and Management Science conferences and journals. Our research areas include Cybersecurity; Data Management & Analytics; Human-Machine Interaction; Information Systems Management; Intelligent Systems & Optimization; Machine Learning & Intelligence; Multimedia; Sensing, Sense-Making & Activation; Software Engineering & Systems.

SIS offers a suite of degree programmes. Our B.Sc. (Information Systems), B.Sc. (Computer Science) and B.Sc. (Computing & Law) have been remarkably successful in demonstrating educational innovations and creating a culture of learning, establishing external linkages and partnerships with industry, government and the social sector, and with job placement. We run a highly ranked Master of IT in Business degree, with specializations in Analytics; Artificial Intelligence; and Financial Technology & Analytics. Our doctoral degrees, including Ph.D. (Computer Science), Ph.D. (Information Systems) and Doctor of Engineering, have produced graduates who joined highly sought organizations in academia and industry.

For more information, please visit: https://sis.smu.edu.sg/

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