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Red Dot Analytics completes seed fund round to commercialise tech that dramatically improves data center sustainability

Red Dot Analytics, a NTU spin-off, has successfully raised seed funds to commercialise their proprietary technology that helps digitalise, optimise, and automate Data Centre operations, improving the data center's CAPEX, OPEX, and sustainability.

1 June 2021, Singapore -- Red Dot Analytics (RDA), a spin-off from Nanyang Technological University (NTU) in Singapore, has completed a seed fund round with investment from IMO Ventures, Avior Capital, and GSR Ventures. The investment will enable RDA to commercialise its award-winning research into commercially viable services and applications.

RDA has pioneered an artificial intelligence (AI) driven digital twin solution, also known as a cognitive digital twin, that helps transform data center operations and management. The technology pivots on a network of industry-grade digital twins, cross-calibrated with operational data from existing IoT devices by an AI agent. The network of twins serves two purposes to synthesize a large volume of self-labeled operational data for AI model training and validate control policies derived from well-trained AI models, in a dual cycle loop manner.

Ms Yutong Zhang, Managing Director of GSR Ventures remarked that, "The digital twin technology models critical infrastructure in the physical world and optimises operations through AI. RDA's core team has been on the cutting edge of digital twin research for many years, specialising in automation solutions for dynamic cooling optimisation, predictive maintenance, and capacity management. They've helped leading data center

customers to significantly reduce their energy cost and breakdown risk."

The research and development work is led by Prof. Wen Yonggang, a full Professor and President's Chair of Computer Science and Engineering at NTU, who has won multiple industry accolades including the Data Centre Dynamic Award (2015), the ASEAN ICT Medal Award (2016), and the IEEE Industrial Technical Excellence Award (2020). Prof Wen says that "surging demand for digital services translates to more data centres being built, which naturally brings about concerns as to their associated energy consumption and consequent impact on climate change."

The digital twin technology enables data centre operators to apply AI-driven digital transformation to solve a big dilemma in the industry: how to achieve energy efficiency without compromising its availability. "Our technology improves the sustainability of data centers in terms of their energy and carbon footprint, as it greatly increases the productivity, efficiency, and resiliency of a data center's facilities," Prof Wen added. "Another benefit is that capital and operational expenditure investment in a data center can be reduced."

The investors cited the team of researchers, the importance of the data centre industry and its increasing impact on climate change, along with the brilliance of RDA's technology as their reasons to invest in commercialising RDA's technology.

Mr. Hai Liu, a partner of IMO Ventures says, "Red Dot Analytics, led by Professor Yonggang Wen, has a world-class team of the most brilliant researchers from MIT, NTU, and USTC. They are one of the earliest pioneers in optimising data centre operations, with profound understanding and award-winning achievements.

Ms Zhang added, "In 2021, end user spending on data center infrastructure is expected to hit $200 billion, accelerated by the post-pandemic growth in demand for digital transformation. And we believe that RDA will be able to expand to more industries in the future."

Mr. Simon Sun, the president of Avior Capital said, "We are proud to be involved in the growth of RDA and look forward to more cooperation."

Calvin Sun, who is the VP Business Strategy and Development at RDA, says that, "By commercialising the digital twin technology, RDA hopes to collaborate and partner with more data centre operators and equipment vendors to transform the future of data centers into a much greener and sustainable one."

RDA is a spinoff from NTU and received an initial investment from Yincubator, and grants from Enterprise Singapore.

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QUOTATIONS

Professor Wen Yonggang, co-founder at RDA:

"In the era of technology, we are at today, demand for digital services have brought along huge concerns on energy and climate changes. At RDA, we believed that this breakthrough will not only bring along potentials in carbon reduction, it will also greatly increase productivity, efficiency and resiliency for data centres critical facilities operations. Our core objective is to help data centres improve overall sustainability (energy and carbon footprint), reducing capital and operational expenditure, with immediate payback as we battle against climate changes."

Calvin Sun, VP Business Strategy and Development at RDA:

"I'm very excited to be a part of this new AI-driven, digital transformation mission, and this round of seed funding will expedite our commercialisation plans in many areas. Having spent more than two decades in the data centre industry, one of the biggest dilemmas faced by many is on how to achieve energy efficiency without compromising its availability, and our aim is to empower our customers with such decisions. In 2021, our focus is to speed up our product development, widen our reach to the market through partnership, and strengthen our customer support."

Mr. Hai Liu, a partner of IMO Ventures:

"Red Dot Analytics, led by Professor Yonggang Wen, has a world-class team of the most brilliant researchers from MIT, NTU, and USTC. They are one of the earliest pioneers in optimising data centre operations, with profound understanding and award-winning achievements. Data and data services are having increasingly significant impacts on people's daily life, which drives the cloud industry to grow by 10 to 100 times. As a consequence, climate change prevention and carbon neutrality become ever more important, and RDA plays a critical role in this revolution. IMO is dedicated to investing in more projects about carbon neutrality, and believes RDA would substantially contribute to the global carbon neutrality mission through bringing AI to clouds."

Mr. Simon Sun, the president of Avior Capital, a Singapore based investment company which focuses on "ABC", which means AI, Big data and Cloud:

"RDA is an excellent company focusing on data centre planning, design, energy saving and carbon emission, Professor Wen, and his team are the leaders in the related industry in Singapore. We are proud to be involved in

the growth of RDA and look forward to more cooperation."

Ms Yutong Zhang, Managing Director of GSR Ventures:

"The digital twin technology models critical infrastructure in the physical world and optimises operations through AI. RDA's core team has been on the cutting edge of digital twin research for many years, specialising in automation solutions for dynamic cooling optimisation, predictive maintenance, and capacity management. They've helped leading data center customers to significantly reduce their energy cost and breakdown risk. In 2021, end user spending on data centre infrastructure is expected to hit $200 billion, accelerated by the post-pandemic growth in demand for digital transformation. And we believe that RDA will be able to expand to more industries in the future."

Enterprise Singapore (ESG) has played an important role in supporting RDA's growth. **Mr. Yeoh Choon Jin, Director for Urban Solutions and Infrastructure Services, Enterprise Singapore (ESG)**, said:

"Enterprise Singapore is committed to promoting innovation and nurturing aspiring businesses and start-ups across the Urban Solutions sector. With ESG's support, Red Dot Analytics has successfully demonstrated that its digital twin technologies can effectively enhance energy management in the data centre industry. We will continue to support RDA to advance its technical capabilities and business footprint in Singapore and across the region."

About Red Dot Analytics Pte Ltd

Red Dot Analytics Pte Ltd (RDA) is a spin-off from Nanyang Technological University Singapore, with an initial investment from Yincubator and grants from Enterprise Singapore. RDA focuses on commercialising an award-winning cognitive digital twin solution to digitalise, optimise and automate data centre operations and management for business continuity and sustainability.

https://www.rda.ai/

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