



NVIDIA and NSCC to Set Up First Shared AI Platform for Singapore National Programmes

Agreement Includes Deep Learning Training for 400 Researchers and Developers

SINGAPORE—October 24, 2017—NVIDIA and Singapore's National Supercomputing Centre (NSCC) today signed an agreement to establish a platform to bolster artificial intelligence (AI) capabilities among its academic, research and industry stakeholders and in support of AI Singapore (AISG), a national programme set up in May to drive AI adoption, research and innovation in Singapore.

Called AI.Platform@NSCC, it will provide AI training, technical expertise and computing services to AISG, which brings together all Singapore-based research and tertiary institutions, including the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore University of Design and Technology (SUTD), Singapore Management University (SMU), as well as research institutions in the Agency for Science, Technology and Research (A*STAR).

In line with AISG's broader aims to nurture a local community of doers and thinkers in AI, AI.Platform@NSCC is an example of a "makerspace" environment. Using shared resources and intentionally designed facilities, the ecosystem will maximise community interaction and collaboration, and encourage adoption of intellectual property generated by AISG.

The platform will be launched early next year and located at NSCC's Data Centre in Connexis Building, Fusionopolis. For training and research, it will be equipped with six NVIDIA® DGX-1™ deep learning supercomputers, which deliver the highest levels of computing power to drive

next-generation AI applications, allowing researchers to dramatically reduce the time to train larger, more sophisticated deep neural networks to meet the computing demands of AISG.

The supercomputers are packed with 48 NVIDIA Tesla® V100 GPUs, which provide up to 99x more throughput than standard CPUs – offering up to six Tensor teraflops of AI computing power for AISG's researchers and collaborators to run AI frameworks and algorithm, and conduct proofs of concept.

"We are delighted to work with AISG to target high-performance AI users and promote a high rate of adoption in our communities including industry users. We will work closely with NVIDIA and tap its expertise to fully integrate the AI machines with our current petascale supercomputer, ASPIRE 1," said Professor Tan Tin Wee, Director, NSCC. "Existing users of NSCC will have a seamless experience in analysing their huge datasets already in our multi-petabyte high-performance storage systems."

"A key feature of AISG is a series of Grand Challenges that will inspire both the research community and end users from industry to address major societal challenges that are not only relevant for Singapore but also the global community. Furthermore, AISG aims to deliver 100 meaningful AI projects and proofs of concept to solve real-world problems swiftly. As a complementary effort, the training of 400 AI researchers and developers will certainly expedite the realisation of AISG's goals," said Professor Ho Teck Hua, Executive Chairman, AISG, and Deputy President (Research & Technology) and Tan Chin Tuan Centennial Professor at NUS.

The agreement also covers the provision of intensive deep learning training for at least 400 persons through NVIDIA's Deep Learning Institute (DLI). The planned workshops offer hands-on training for developers, data scientists and researchers looking to solve some of the world's most challenging problems with deep learning. Through self-paced labs and instructor-led workshops, DLI provides training on the latest techniques for designing, training and deploying neural networks across a variety of application domains. Participants will explore widely used open-source frameworks as well as NVIDIA's latest GPU-accelerated deep learning platforms.

"NVIDIA is helping industries transform with deep learning using our GPU computing technologies. We are delighted to partner with NSCC to establish this shared facility to support AISG's mission, giving them a powerful platform for their AI projects and innovations in areas such as intelligent video analytics, natural language processing, genomics and life sciences, and cybersecurity," said Raymond Teh, vice president of APAC, NVIDIA.

About National Supercomputing Centre

The National Supercomputing Centre (NSCC) Singapore was established in 2015 and manages Singapore's first national petascale facility with high performance computing (HPC) resources to support science and engineering computing needs for academic, research and industry communities. Funded by its stakeholders, including Agency for Science Technology and Research (A*STAR), Nanyang Technological University (NTU), National University of Singapore (NUS), and Singapore University of Technology and Design (SUTD), with substantial funding from the Singapore Ministry of Trade and Industry (MTI), NSCC aims to democratise access to supercomputing. NSCC works with local and international organisations to catalyse collaborative HPC projects and programmes which support national research and development initiatives, attract industrial research collaborations and enhance Singapore's research capabilities. For more information, please visit https://nscc.sg.

About AI Singapore

Al Singapore (AISG) is a national programme launched by the National Research Foundation (NRF) to catalyse, synergise and boost Singapore's artificial intelligence capabilities to power our future, digital economy. AISG is driven by a government-wide partnership comprising NRF, the Smart Nation and Digital Government Office (SNDGO), the Economic Development Board (EDB), the Infocomm Media Development Authority (IMDA), SGInnovate, and the Integrated Health Information Systems (IHiS). The three focus application areas of AISG are Health, Smart Cities and Finance.

AISG will also bring together all Singapore-based research institutions and the vibrant ecosystem of AI startups and companies developing AI products to perform use-inspired research, grow the knowledge, create the tools, and develop the talent to power Singapore's AI efforts. For more information on AISG, please visit https://www.aisingapore.org.

About NVIDIA

<u>NVIDIA</u>'s (NASDAQ: NVDA) invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined modern computer graphics and revolutionised parallel computing. More recently, GPU deep learning ignited modern AI — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world. More information at http://nvidianews.nvidia.com/.

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