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ASIA EDITION

Singapore to leverage smart data platform to improve operational efficiency

March 24, 2021 | News | By Hithaishi C Bhaskar

Singapore National Eye Centre collaborates with NCS to leverage the smart solutions to be the country's first machine-learning-enabled Appointment Scheduling Optimiser (ASO)



The Singapore National Eye Centre (SNEC) has partnered with NCS to design, build, and deploy a new Appointment Scheduling Optimiser (ASO) to transform clinic operations, reduce patient waiting times and allocate manpower and resources more efficiently. The ASO taps on NCS NEXT's expertise in artificial intelligence (AI), advanced analytics, deep learning, and machine learning technology with the goal of addressing operational challenges and resourcing.

The ASO is scheduled for rollout in the fourth quarter of 2021 and is planned for further scaling and deployment across all SingHealth institutions to improve overall clinic operational efficiency, elevating patient satisfaction and experience. Annually, SNEC manages a workload of 360,000 patient visits in its Specialist Outpatient Clinics.

Ms Charity Wai, Chief Operating Officer, SNEC said, "Currently, appointment scheduling for all patient visits including those requiring initial consultations and the necessary same-day eye services and investigations is a time and labour-intensive process handled by appointment staff. To address the growing volume of appointment requests and limited visibility over demand at multiple service stations resulting in bottlenecks and long clinic waiting times, SNEC collaborated with NCS to leverage the Appointment Scheduling Optimiser to resolve the various pain points."

NCS will deploy advanced data and predictive analytics as well as machine learning to tailor an in-house schedule optimisation ASO platform. Using SNEC data sets with exact patient and operational requirements, AI algorithms perform supply-demand matching and appointment schedule optimisation is done continuously and incrementally with minimal human intervention, until an optimal daily schedule is reached, matching confirmed patient appointments with all available clinical resources.

Mr Howie Sim, Vice President, Healthcare & Transport Client Service Unit, NCS said, "The first-of-its-kind in Singapore, the Appointment Scheduling Optimiser marks the first of many use cases in healthcare, such as the improved allocation of hospital beds, operating theatres, and even optimising valuable nurse-to-patient staffing for better care. The Appointment Scheduling Optimiser is an example of how digitalisation of business operations can revolutionise customer outcomes."

The ASO operates on NCS' proprietary Enterprise Schedule Optimisation Platform which offers the opportunity to scale the capabilities of the smart scheduling solution, offering businesses in a range of industries beyond the healthcare sector greater flexibility to customise solutions to better suit their needs. The ASO will leverage data analytics to better predict future resourcing demand, enhance optimisation and improve long-term resource allocation as well as operational efficiency.