

## CAREERS IN THE PUBLIC SECTOR

## Engineering ingenious solutions

Mr Sim Gim Young ensures the readiness and quality of SAF's armaments stockpile

DOUGLAS CHEW

ALWAYS curious to find out how things work, Mr Sim Gim Young, 32, found his calling in engineering as a child. He loved tinkering with model car kits and enjoyed constructing structures with Lego bricks.

As he enjoyed how science explained "the logic behind things", pursuing a degree in mechanical engineering was the natural path for him.

"My university attachment at an aviation maintenance company reaffirmed my interest in engineering as I got to see first-hand how engineering ingenuity was applied to solve various real-world challenges," he says.

After graduating in 2008 from Nanyang Technological University, Mr Sim joined Singapore's Defence Science and Technology Agency (DSTA) as an armaments safety engineer.

He ensured armaments remained safe in storage and during transportation. DSTA strengthens Singapore's defence by developing cutting-edge technological solutions and delivering advanced capabilities and support to the Singapore Armed Forces (SAF).

In his seven years at the organisation, he has worked on hand and smoke grenades, thunder flashes and hand-fired rocket illuminators.

Last year, he was promoted to system manager and makes sure SAF's armaments and pyrotechnics meet stringent safety, performance and quality standards.

These standards are achieved through a comprehensive surveillance programme that includes regular inspections, chemical analysis and firing tests.

### Smooth operation

Mr Sim's job often takes him to SAF camps, where he meets his military counterparts to discuss issues they face and understand their requirements.

He gets to work with munitions manufacturers and attend live-firings to evaluate weapon systems.

He says: "While work can be tough at times, we share a common vision with our SAF partners and are able to build a strong camaraderie with each other. This makes my work enjoyable and satisfying."

"Ensuring the readiness and quality of SAF's armaments stockpile is critical to soldier training and safety, and knowing that my work can help make a positive impact for our soldiers in the SAF is rewarding."

DSTA provides a structured training programme for all its new hires. Since armaments was not a topic covered during his undergraduate studies, Mr Sim had to pick up the knowledge from specialist courses conducted by the agency.

He had mentors who guided him and supportive teammates and supervisors, giving him many opportunities to learn and contribute.

"There is a great extent of knowledge and resource sharing within the organisation."

The opportunity to learn from, and share expertise with, one another makes it easier to assimilate into projects quickly," he says.

He engages with armament professionals from across the globe. For instance, he attended a North Atlantic Treaty Organisation meeting on armaments safety in 2010, and participated in a focus group discussion on emerging risk-mitigation technologies to improve the safety of armaments with global experts in the United States in 2013.

One of his best work experiences was playing a part in lighting up the sky as he was in the fireworks committee for the National Day Parade from 2012 to 2014.

He computed the impact of different wind speeds on debris from the bursts of fireworks shells to make sure spectators stayed safe.

He also supported the fireworks team at this year's South East Asian Games during the opening and closing ceremonies, ensuring the roofing material at the new stadium could withstand the heat and sparks from the fireworks.

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**MR SIM GIM YOUNG**  
system manager  
Defence Science and Technology Agency

He was involved in this year's National Day spectacular as well, this time to mentor a colleague who is taking over the fireworks portfolio from him.

### Making the cut

Mr Sim enjoys the engineering challenges he gets to tackle at DSTA, and derives meaning from contributing



directly to the nation's security.

"I love my job and I guess it has something to do with my determination and passion for problem solving."

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envelope for ideas further," he says.

To excel in DSTA and the public service, Mr Sim believes that logical thinking and good communication skills are vital.

He says: "With sound logic, you can decipher and make sense of complex issues easily. This is helpful because

you want to solve problems as efficiently as possible.

"Communication and teamwork are also important as we work in multidisciplinary teams and need to explain technical issues in a clear manner for various stakeholders to understand."



Above: Fireworks display at this year's National Day Parade (NDP). Left: Next to Mr Sim on the fireworks barge are fireworks mortar tubes used for the NDP fireworks display. PHOTOS: DSTA, MEDIA TEAM FIREWORKS COMMITTEE NDP 15