

## Autonomous Smart Mobility Platform Clinches Top Prize at MIT Hacking Medicine Robotics Singapore 2017

*Winning team, Botler, creates a patient-friendly autonomous transport system at Asia's first Hackathon for social robotics in eldercare.*

**Singapore, 13 February 2017** – The creators of Botler have been officially announced as the winners of MIT Hacking Medicine Robotics Singapore 2017. Their solution looks at using the [Segway Robotics Platform, Loomo](#), to build an autonomous system for transporting elderly patients and residents at nursing homes and extended-care facilities to where they need to go. The system utilises facial recognition algorithms to identify patients, then connects with their wheelchair using a custom-designed electromagnetic coupling, allowing Loomo to move wheelchair-bound patients to and from activities such as meals and medical appointments. This autonomous system for moving patients and residents from location to location frees up manpower, enabling them to focus on more critical care and medical tasks.



**(From left to right) Sarah Zhang, Business Lead and Head of Developer Partnerships, Segway Robotics, Botler team members - Bernard Choong, Albert Hardy, Lee Meng Har, Tomonori Yamamoto, Kok Yuan Yik, with Steve Leonard, Founding CEO, SGInnovate, Howard W. Califano, Director, SMART Innovation Centre, Ong Jeong Shing, Investment Director, VentureCraft**

“My team and I shared a collective vision to transform regular everyday mobility for the elderly into an autonomous smart system, leveraging the convenience of the Loomo platform,” said Kok Yuan Yik, Robotician and Botler team leader. “We hope to be able to deploy our solution amongst the elderly and aim to work closely with SGInnovate to develop Botler further.”

Held from 10-12 February at SGInnovate on 32 Carpenter Street, MIT Hacking Medicine Robotics Singapore 2017 is Asia's first hackathon to address unmet needs in elderly care and medicine and how robotics can play a role in aiding an aging society. This year's hackathon saw 83 participants, including clinicians, programmers and engineers, work on addressing a diverse range of eldercare challenges from fall prevention to dementia care. The hackathon opened with a Facebook 'LIVE' panel with Minister for Foreign Affairs and Minister-In-Charge of the Smart Nation Initiative, Dr Vivian Balakrishnan, who joined fellow healthcare and robotics experts to discuss challenges and opportunities in eldercare in response to ageing populations around the world.

Botler beat out a total of twelve teams to clinch the top prize. Team DORI came in second with a concept for a personalised social robot capable of monitoring cognitive health, while third-place winners, Team NOW, designed a robotic nurse-on-wheels (NOW) able to detect, diagnose, alert and manage cardiac events amongst elderly patients. The winners of the MIT Hacking Medicine Robotics Singapore 2017

will next be taking part in an on-stage panel at EmTech Asia 2017, taking place from 14 to 15 February 2017, to discuss their hackathon experiences and the potential of robotics to provide long-term solutions in elderly care and the overarching healthcare industry in Singapore. In addition to a grand prize of \$5K USD for the winning team, the top three teams will also have access to prototyping facility labs, the Segway Robot Developer Edition platform, Loomo, as well as funding to build on their solutions and launch their companies.

"MIT Hacking Medicine Robotics Singapore 2017 demonstrates how we convene, energize and teach a global community to collaboratively innovate solutions for some of the most critical healthcare challenges, particularly in elderly care," said Khalil Ramadi, Co-Director of MIT Hacking Medicine. "Working in Singapore with teams like Botler, NOW and DORI, as well as our partners, SGInnovate, SMART and Segway Robotics, we are able to "hack" digital technologies and bring in new ones, such as robotics and even machine learning, making MIT Hacking Medicine a leading global voice in healthcare innovation."

"Hacking Medicine Institute and MIT Hacking Medicine are thrilled to continue our support of this programming with our partners in Singapore," said Judy Wang, Executive Director of Hacking Medicine Institute, the non-profit organization which oversees MIT Hacking Medicine events and activities. "We are pleased to see the growth of digital health entrepreneurship in this region, and we look forward to exploring additional ways to cultivate the digital health ecosystem to have a lasting, positive impact for healthcare in Singapore and beyond."

Robots are being seen as an increasingly viable complement to other emerging healthcare technology trends such as smart monitoring systems and mobile applications, to ease the reliance on human caregivers. With the number of Singaporeans aged 65 and above projected to double to 900,000 by 2030, one in four Singaporeans is likely to require elderly care by then. This puts increasing pressure on Singapore's healthcare industry, which is planning to add an additional 30,000 healthcare workers by 2020. These challenges are not unique to Singapore; it affects countries with ageing populations worldwide.

"Working with the MIT Hacking Medicine team is exactly what we do at SGInnovate – helping ambitious and capable people use various technologies to create possible solutions to global challenges," said Steve Leonard, Founding CEO, SGInnovate. "We look forward to working closely with Botler and others who want to move their work from 'research to real-world', making a positive impact on lives around the world."



***Winners of the MIT Hacking Medicine Robotics Singapore 2017 celebrate following the prize-giving ceremony, marking the conclusion of this year's hackathon.***

This year's judging panel consists of Steve Leonard, Founding CEO, SGInnovate, Ong Jeong Shing, Investment Director, VentureCraft, Sarah Zhang, Business Lead and Head of Developer Partnerships,



Segway Robotics, Gerard Chew, Head, IHIS Innovation Labs, Yorelle Kailka, Founder and CEO, Active Global Specialised Caregivers, Prof. Li Haizhou, Department of Electrical and Computer Engineering, NUS.

SGInnovate is the Founding Sponsor of MIT Hacking Medicine Robotics Singapore 2017, with Segway Robotics as the official Robotic Platform Sponsor. Other participating partners include the Singapore MIT Alliance for Research and Technology (SMART), MIT Hacking Medicine, Singapore University of Technology and Design (SUTD), Venturecraft, EmTech Asia, Google, PIXEL Labs, Integrated Health Information Systems (IHIS), Action Community for Entrepreneurship (ACE) and ACCESS Health International.

### **About MIT Hacking Medicine**

MIT Hacking Medicine is an organization that aims to “energize and connect the best minds across MIT and the health ecosystem to teach, learn, and launch the next generation of healthcare solutions to solve healthcare’s biggest challenges at home and abroad.”

### **About SGInnovate**

SGInnovate is wholly owned by the Singapore government, under the purview of the National Research Foundation with a focus on enabling the entrepreneurial potential of ambitious men and women based in Singapore who believe they can build a start-up. With an emphasis on science and deep-technology, SGInnovate brings together partners from the private sector, institutes of higher learning, and research organisations as part of Singapore’s broader ecosystem of innovation. Through this ecosystem, SGInnovate connects these aspiring entrepreneurs with support for business-plan development, sources of funding, and go-to-market efforts. For more information on SGInnovate, please visit <https://www.sginnovate.com/>

### **About Segway Robotics**

Founded in 2016, [Segway Robotics](http://www.segwayrobotics.com/) is a privately held company that focuses on developing and commercializing personal robots. Segway Robotics Inc is fully owned by Segway & Ninebot, a series B company. Notable backers include Sequoia Capital, Intel Capital and Xiaomi. For more information, visit our official site at <http://www.segwayrobotics.com/>.

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