

Robots to the Rescue: V13 Policetech Accelerator Develops Self-Sanitizing Sign-In System to Fight the Spread of COVID-19 in the Workplace

Thermal imaging, sanitization and contact tracing are critical points of defence against the spread of COVID-19. That's why the team at Venture13's Policetech Accelerator have been hard at work developing a system that incorporates cutting edge safety measures.

Cobourg, ON (September 29th, 2020) - The [Venture13 Policetech Accelerator](#) (a joint partnership of Venture13 partners the Cobourg Police Service and Northumberland CFDC) has upgraded their innovative check-in robot to include a fully-automated UVC (ultraviolet C) light disinfection system. Consisting of a thermal image camera and a touch-screen tablet, the robot allows guests to sign in and fill out a brief COVID-19 questionnaire, before the system performs self-sanitization using UVC light in preparation for the next user.

Amidst the societal changes brought about by the novel coronavirus pandemic, developers around the world and here at [Venture13](#) responded to the challenge of utilizing technology to enhance the safety of public spaces and to ensure the continuity of business operations. It was not long before an opportunity for innovation emerged.

"The Venture13 space is already well-equipped with sanitization solutions," said Venture13 Policetech Intern, Osaffat Khan, an engineering undergraduate student at Ontario Tech University in Oshawa. "But the tablets that many facilities—including ours—rely on for visitor check-in stood out to me as a high-touch point." From there, the idea for a tablet sterilization system was born. The system would be built onto an existing robotic platform provided by [CrossWing](#), which had previously been modified to accommodate a ThermaScans thermal detection system. The project's first phase involved research to explore possibilities and locate the appropriate components, including the UVC LED lights to eliminate bacteria from the tablet surface. After developing a 3D model, the system began to take shape and the parts were produced using the rapid prototyping tools located at the mechatronics-focused Venture13 MakerLab.

Once assembled and operational, the tablet disinfection system will work in conjunction with the ThermaScans unit and digital sign-in device to move employees and visitors through the Venture13 building safely. The thermal imaging technology and questionnaire upon entry will help ensure multiple lines of defense against admittance of individuals who may have contracted COVID-19. In the event of identification of a COVID-19 case, this data will serve as a contact tracing log, providing critical information on individuals who may be at risk. While the device was intended for use at the Venture13 space, it has garnered interest from a number of other companies as they navigate the challenge of a transitional period or full on return to work. Implemented on a larger scale, the Policetech team is



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confident that the sanitization system will be instrumental in protecting the health of employees and contributing to the prevention of community transmission.

Despite the unforeseen circumstances presented by the COVID-19 pandemic, [Northumberland CFDC](#) has maintained their commitment to creating opportunities for students as they transition into the workforce. With support from the Canada Summer Jobs initiative, the Northumberland CFDC internship program welcomed two interns in 2020. As the Policetech Accelerator Intern, Osaffat Khan worked diligently over the summer to assemble and refine the UVC sanitization device design until he had achieved full functionality. "I've had a blast working alongside such supportive and like-minded individuals at the Policetech Accelerator," said Khan, of his internship. "My experience has allowed me to expand my network, develop my skills in engineering and project management, and begin developing my own technology solution for use in the Venture13 space."

As an investment in Canadian youth and innovation, the project funded through Canada Summer Jobs, embodies the Policetech Accelerator's dedication to entrepreneurship, collaboration, and innovation in community safety. "With the support of the Government of Canada, Northumberland CFDC has offered young people some of the most exciting and engaging internship opportunities in Northumberland, including applied engineering and technology challenges that hone their skills in a real-world, entrepreneurial environment" said Wendy Curtis, Northumberland CFDC Executive Director. "We were pleased to have Ossafat Khan develop a robotics solution this summer to strengthen workplace safety at Venture13 in our very own hyperlocal COVID-19 testing stream."

With an early success under their belt, and with the help of some exceptionally talented youth, the team looks forward to a bright future supporting and driving collaborative innovation.

Venture13 Policetech Accelerator

The Policetech Accelerator™ at Venture13 (V13 Policetech Accelerator) is a joint initiative of the Cobourg Police Service (CPS) and Northumberland CFDC that is actively developing a pipeline (from idea to implementation) of innovative policing technologies and best practices for community safety in Ontario and around the world. Founded on the existing reputation of the CPS as a leading police service innovator, while creating an ecosystem for startups and a soft landing zone for innovative law enforcement companies into the Northumberland region. The V13 Policetech Accelerator project will encourage innovation along a continuum from ideation to early-stage R&D to validation stage with collaborations and demonstration projects through both start-up and scale-up streams. For more information visit www.policetechaccelerator.com

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