



**Caribbean Diaspora for Science, Technology & Innovation  
New England**  
*Promoting Science and Technology for Caribbean Youth*

**CADSTI-New England Quarterly Newsletter Q3, 2020**

**Dear Friends and Supporters of CADSTI-New England,**

It is a pleasure to share with you the highlights from this summer's CADSTI-NE internship program and the Student Program for Innovation in Science and Engineering (SPISE), both of which were successful despite the challenges of COVID-19! Since 2014, CADSTI-NE has organized internships for graduates of SPISE to complement their academic education with valuable first-hand experience in the work world, applying STEM to research and development. Of our 46 internships at 17 organizations to-date, 2 successful internships were completed this summer, hosted by TraceLink in Massachusetts and Foursquare Rum Distillery in Barbados. More details follow below on these two interns and their valuable experiences.

In addition, CADSTI-NE continued to provide significant support for SPISE (see below for more information on SPISE). Because of the pandemic, SPISE 2020 was held completely virtually, with the students participating from home. SPISE was extended to 5 weeks this summer, and the students were exposed to university-level classes in calculus, physics, computer programming, electronics, biochemistry and entrepreneurship. Seven TAs were part of the SPISE staff this summer, to ensure that the students would have plenty of assistance always available. Notably, three of these TAs and 1 instructor were SPISE graduates, giving back to the Caribbean already! The students adapted very quickly to the virtual format, with plans to stay in-touch and meet in person one day. The 17 students from 5 Caribbean countries in SPISE 2020 brings the total number of SPISE graduates to 169!

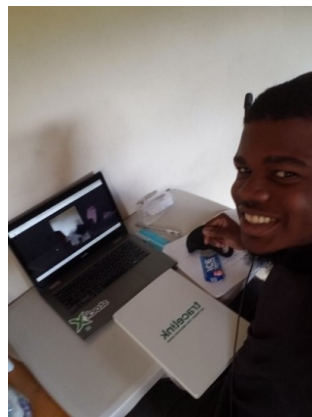
We look forward to the SPISE 2020 graduates participating in future CADSTI-NE internships, as we continue to provide mentorship, guidance, support and encouragement for all SPISE graduates as they progress along academic and career paths in science and technology.

**About CADSTI-NE:** CADSTI-NE is a US-based 501(c)(3) non-profit organization launched in 2014 that focuses on empowering Caribbean youth through science and engineering experiences. Our major projects are to:

1. *Coordinate and finance the summer internship program for SPISE graduates*  
The student internship program launched in 2014 provides opportunities for SPISE graduates to experience first-hand the application of STEM to research and development within biotech, high tech and other organizations in the U.S., Canada, UK and Caribbean.
2. *Support SPISE, held in the Caribbean for Caribbean students by the Caribbean Science Foundation (CSF).*

**Internships - 2020** This summer, against all odds with the numerous challenges of the COVID-19 pandemic, we had 2 successful internships completed out of the 11 opportunities we started with in January. In addition to the internships themselves, the students gained important life experiences in resilience and adaption to change. Foursquare Rum Distillery was able to offer an in-person internship, although about a month later than the normal schedule, for a SPISE graduate from Barbados, since no travel was needed and the number of COVID-19 cases in Barbados was low. At TraceLink, the internship was shifted to an entirely on-line experience. An unexpected advantage to this was an extended internship duration of 16 weeks which provided more opportunity to dive even deeper into the projects. More details about both internships follow.

**Matthew Clarke (Barbados)**  
Third year Computer Engineering major at Leigh University | PA, USA  
TraceLink, North Reading MA, USA



TraceLink is the world's largest integrated digital supply network, providing real-time information sharing for better patient outcomes by delivering complete global connectivity, visibility, and traceability of pharmaceuticals from ingredient to patient. Matthew worked as a Quality Assurance intern this summer and was responsible for troubleshooting and fixing software defects. He states that his internship at TraceLink was "probably [his] most important internship so far for professional experience as well as personal growth" as it provided him with his first opportunity to work in the US tech industry. Matthew successfully overcame the challenge of quickly ramping up in a job that required assimilation of multiple new and complex concepts. Furthermore, he felt that he was able to accomplish most, if not all the goals that he had for the internship including getting a feel for the pace and office culture in the tech industry (specifically in the US), adapting to a new work environment despite all the unique circumstances such as working remotely, and expanding his network with professionals in the high-tech industry. This summer, all TraceLink teams were working remotely in response to COVID-19. This posed a new challenge for Matthew's internship, but through the use of communication tools such as Slack and Zoom, and a great work culture, Matthew felt supported and close to the team. Overall, this internship provided Matthew with a great experience, including further insight into potential next steps in his career path.

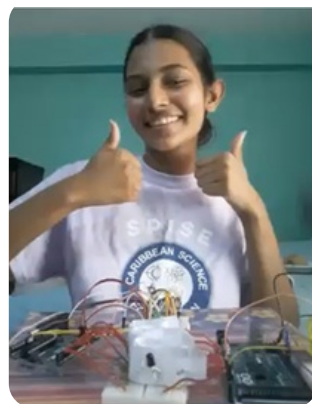
**Amir Alleyne (Barbados)**  
First year Computer Science major at University of Toronto | Ontario, Canada  
Foursquare Rum Distillery, Barbados



Foursquare Rum Distillery manufactures rum with state-of-the-art equipment and systems. Amir gained first-hand experience with rum making during his 4-week internship. He reports that it was an 'eye-opener' to see the many, diverse jobs that are needed to make the final product - rum. Amir worked on both chemical and physical parts of the process including using different extraction methods, testing alcohol levels, and fermenting, distilling and preserving rum, as well as bottling. COVID-19 safety steps in place included frequent handwashing, self-temperature checks daily and additional temperature checks done by fellow staff. Masks were required, and social distancing was in-place, which was easy to accommodate due to the normally low density of workers at the distillery. Amir saw the value in enjoying one's work and staying focused to produce top results. He also observed how the inter-dependency of all steps in a process is critical to produce the product, and gained an appreciation of the importance of communication and interactions with co-workers. Overall, this internship experience provided valuable learnings about what makes companies successful.



**The Student Program for Innovation in Science and Engineering (SPISE)** is an annual 5-week summer residential program in Barbados for Caribbean high-school students who are gifted in Science, Technology, Engineering and Mathematics (STEM), and interested in studying and exploring careers in these disciplines. SPISE is modeled after the well-known and highly successful MITES program at MIT for which Professor Cardinal Warde also serves as the Faculty Director. SPISE students are totally immersed (24/7) in university-level calculus, physics, biochemistry, entrepreneurship, one-Caribbean studies, and hands-on projects in robotics or electronics, and computer programming. The SPISE environment discourages rote learning and teaches students how to focus on understanding and applying the fundamentals so as to achieve mastery of the material, and thus be able to solve complex problems. The value of teamwork (learned in the hands-on projects) is yet another essential skill that is emphasized, along with proactive time-management skills. Instructors in the SPISE include university professors from the Caribbean and the Diaspora (including MIT), and senior management professionals from leading biotechnology and pharmaceutical companies in the Diaspora. The program culminates with student project competitions in which each team first gives an oral presentation of their hands-on project before demonstrating the workings of their project to the public.

To date, SPISE has served 169 students from 15 Caribbean countries. SPISE graduates from the 2012-2019 classes are now enrolled at the world's top science and engineering universities including MIT, Stanford, Harvard, Princeton, Yale, Columbia, Dartmouth, U Penn, McMaster University, Ryerson University and UWI. Most of these students have substantial financial aid packages, and some have full scholarships. Further details can be found at <http://caribbeanscience.org/projects/spise.php>.



SPISE 2020 LUCELEC Scholar, Hailey Boriel, with her electronics project – an inference engine that creates musical tunes

**2020 Internship Hosts and Sponsors** Sincere thanks to our partner organizations, who devoted time and resources to plan for, on-board and mentor the student interns.

Internship Host Organization	Location	Company Focus
	Barbados	Small company manufacturing rum with state-of-the-art equipment and systems.
	North Reading MA, USA	Software company focused on serialization within the pharmaceutical supply chain enabling supply chain collaboration.

**Join Our Effort!** We would greatly appreciate your assistance to CADSTI-NE (a US-based 501(c)(3) non-profit organization) in any or all forms! If you have any questions, please reach out to Dinah Sah, President of CADSTI-NE, at [dsah@cadsti-ne.org](mailto:dsah@cadsti-ne.org).

Thank you, as always, for your support!

With much appreciation,

The CADSTI-NE Leadership Team



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