CAOE | CENTER FOR ACCELERATING OPERATIONAL EFFICIENCY

A DEPARTMENT OF HOMELAND SECURITY CENTER OF EXCELLENCE

CAOE hosts privacy workshop in collaboration with DHS Privacy Office

Privacy-enhancing technologies or (PETs) promise the ability to control the sharing and use of sensitive information while minimizing the risk of unauthorized use. Examples of PETs include: communication anonymizers that remove personally identifiable information from text, synthetic data generators that create realistic data for use in test environments, and data encryption that converts data to an unintelligible form for data storage or transit. These technologies have been under development for many years but have been slow to be deployed into operational use.

In June 2022, CAOE hosted a workshop in collaboration with the DHS Privacy Office to bring DHS stakeholders together with the academic community to review real-life case studies. These case studies included needs related to protecting private data, such as social security numbers, and enhancing the cybersecurity of biometrics data. CAOE and the DHS Privacy Office held this workshop with the goal of increasing the collaboration between DHS and leading researchers for developing new solutions to effectively use PETs while mitigating risks.

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TSA-CAOE Symposium 2022 – Understanding Risk in the Cybersecurity Landscape

The Center for Accelerating Operational Efficiency (CAOE) was pleased to host the seventh annual Transportation Security Administration (TSA) Symposium in June 2022. The two-day, hybrid event featured keynote speakers and distinguished expert panelists representing thought leaders and senior executives from across TSA, academia and industry.

TSA Administrator, David Pekoske was the opening keynote for the event and gave an overview of the current objectives for TSA including stressing the importance of collaboration and open communication with the research community and the private sector.

"It's very important to us that we have trusting relationships with all the stakeholders in the transportation [sector]," states Pekoske. "I want all the stakeholders in the transportation sector to feel like they can tell me things that they expect that I don't want to hear because that means that they trust that I'm going to react in a positive way." **READ MORE**

CAOE Summer Research Experience 2022

The annual CAOE Summer Experience Quantitative Analytics (SEQAL) started with a new group of students in June 2022. This four-week research experience combined significant data analytics training with real-world problem solving for TSA operational challenges.

The experience was kicked off by Greg Simmons, Program Manager for Minority Serving Institutions and Workforce Development, Office of University Programs, DHS S&T. Simmons gave examples of different aspects of Homeland Security such as the Coast Guard, Secret Service and cybersecurity and explained the partnerships between academics, industry and government and highlighted some additional opportunities for students including future employment.

Greg Simmons, DHS S&T.

"There is an aspect of workforce development," Simmons explained. "We want to invest in your future and hopefully, you will come work with us on this mission."

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CAOE hosts two Summer Research Teams for Minority Serving Institutions

The purpose of the Summer Research Team (SRT) Program is to increase and enhance the scientific leadership at Minority Serving Institutions (MSIs) in research areas that support the mission and goals of DHS. Each summer DHS gives the DHS Centers of Excellence (COE) the opportunity to host research teams from Minority Serving Institutions (MSI). These teams consist of a visiting faculty member joined by one or more students from the MSI to work on current COE projects under the direction of the COE and the associated research team.

CAOE is hosting two summer researcher teams for summer 2022. One team is from University of Texas at Arlington and is led by Randell Napier, clinical associate professor. This team is also comprised of two student researchers Tyesha Allen and Sofia Mollica. Napier's team is completing their program onsite at Arizona State University
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The second team is from Texas State University and is led by Eduardo Perez, associate professor with the support of two student researchers, Derek Martinez and Diego Zertuche. This is Perez's second time leading a SRT Team for CAOE.

Both teams are working on the project "Robust Workforce Management at a Network of Screening Facilities" led by Jorge A. Sefair, assistant professor, Arizona State University. At the end of the summer, each team will present a seminar showcasing their summer research.

Summer Research Team from University of Texas at Arlington

Sofia Mollica, Tyesha Brown Allen and Randy Napier

Learn more about the team

Summer Research Team from Texas State University

Derek Martinez, Eduardo Perez and Diego Martinez

Learn more about the team

The value of the SRT program

The students involved in the SRT program have all noted the educational and career development gained from participating in the program. The value of the program goes beyond education to students making real contributions to the program.

"Tyesha and Sofia have been exemplary students. Their work has focused on developing a cost-benefit analysis for adjustments to worker allocation in the airport screening process. They spent the summer reviewing literature to quantify the cost of passenger wait time. They applied their cost-benefit models using prior CAOE results (Dynamic Workforce Allocation project) to estimate the advantage of adding new Transportation Security Officers to help alleviate surges during security screening."
Jorge Sefair, Assistant Professor, Arizona State University

"Derek and Diego are performing excellent work this summer. They have learned new topics in industrial engineering and have mastered the use of a simulation software package. The results of their work have the potential to change how decisions are made when allocating resources at airport security checkpoints. "
Eduardo Perez, Associate Professor, Texas State University

In the news

Feature Article: S&T Hackathon Addresses Emerging Threats to Critical Infrastructure

DHS S&T Selects 2022 Summer Research Teams from Minority Serving Institutions