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## Background

The School of Data Science (SDS) at [The University of Texas at San Antonio](#) (UTSA) was established in 2018. SDS is the newest academic unit at UTSA, a public research university founded in 1969 expressly to advance the education of Mexican Americans and other underserved communities. Fifty-six percent of its approximately 34,500 students are from underrepresented groups in higher education. UTSA is classified as an R2: Doctoral University – High research activity.

In 1994, UTSA was federally designated as a [Hispanic Serving Institute \(HSI\)](#). In 1995, the Carnegie Foundation for the Advancement of Teaching selected UTSA to receive its Community Engagement Classification, recognizing the university's commitment to serving the local community. In 2019, Nature Index identified UTSA as a Top 25 Rising Young University. In 2020, it was one of only five HSIs recognized among 569 nationwide by [Excelencia in Education](#) with Seal of Excelencia, a national certification for institutions that strive to go beyond enrollment to intentionally serve Latino students. Today, UTSA is further striving to be a model of student success, a great research university, and an exemplar for strategic growth and innovation excellence.

These distinctive are integral to SDS. The school is, in fact, advances the university mission of access and excellence by developing pathways to a top-20 fastest-growing occupation in the U.S. (U.S. Bureau of Statistics, 2021). It is part of the UTSA guiding vision to put students first in environments focused on their success. SDS intends to create those environments in a [new purpose-built 167,000-square-foot building](#) at the urban core of the seventh largest city and the fastest growing majority minority city in the United States. Groundbreaking for the building, which will also house the [National Security Collaboration Center](#) (NSCC), took place in January 2021. It should be ready for occupancy beginning in August 2022.

In short, SDS is the cornerstone of UTSA's 10-year plan to develop its [Downtown Campus](#) as a destination (1) for producing highly skilled professionals and researchers in data science and analytics and (2) for advancing economic development, personal prosperity, and social mobility at the urban core.

## Funding, Leadership, and Structure

In 2018, UTSA garnered \$75M from The University of Texas System Board of Regents, \$15M from entrepreneur and philanthropist Graham Weston, land valued at \$13M from the City of San Antonio and Bexar County, Texas, and \$5M of its permanent budget for a capital project to build the SDS building. Additionally, the university has committed funding over the next four years to support staff, operations, and research growth.

SDS is led by a Director who is a Professor of Practice in the UTSA University College (UC). UC is the home of multidisciplinary studies, an appropriate positioning for data science. The Director reports to the Provost & Senior Vice President of Academic Affairs and serves on both the [University Leadership Council](#) and the [Academic Council](#). To ensure that SDS extends the education and research of the nine colleges at UTSA, the Director of the school is advised by the Council of Deans. The Director is evaluated in the same way as the Deans with an annual work plan and KPIs.

## Milestones

Through targeted initiatives, UTSA is busy developing the intellectual capital needed for SDS to earn greater national impact and recognition in data science. A few examples follow:

- [Clustered and Connected Hiring](#) – 2018. This targeted hiring had as one of its primary goals to broaden UTSA's data science expertise across more disciplinary areas and to connect them to further deepen

UTSA's reputation and capabilities. Eighteen faculty were hired in a data science cluster and in an AI cluster across the colleges of business, education, engineering, liberal and fine arts, and sciences.

- Multidisciplinary Studies – 2020. University College developed and launched two new undergraduate multidisciplinary studies program in [data science](#) (B.S) and [artificial intelligence](#) (B.S.).
- Certificate Programs – 2021. An [undergraduate](#) and an online [graduate](#) certificate in data science were created and launched this year. The development of these programs has been driven by demand from companies and Department of Defense units in San Antonio.
- Research Grants – 2021. Recent grants awarded to data science and AI faculty cluster hires include the following: *Leveraging big data to improve equity* (UNCF, Excelencia in Education). *Disentangling dementia patterns using artificial intelligence on brain imaging and electrophysiological data* (San Antonio Medical Foundation). *Data-driven methods and algorithms to make cyberinfrastructure more resilient against ransomware attacks* (NSF).

SDS is also benefitting from two philanthropic gifts for the following:

- [Draper Data Science Business Case Competition](#). To discover and support student entrepreneurs and innovations that advance or apply data science (2020)
- [Frost Excellence Fund](#). To pursue emerging research opportunities and new directions in data science – includes graduate research fellowships (2021)

## Challenges and Plans to Overcome Them

In addition to the ubiquitous challenges for data science centers, institutes, and schools to increase faculty engagement and institutional support of interdisciplinary work, SDS faces some unique challenges to achieving its mission to increase access and excellence in data science.

1. Creating a vibrant data science *campus* community. SDS is located intentionally on the [UTSA Downtown Campus](#) in an emerging tech corridor. The location serves the mission. However, it is [16 miles](#) from the UTSA Main Campus. Additionally, most of the 78% of the students at UTSA work while in pursuing their degrees, and 21% work full-time. Their availability limits community-building opportunities. Current plans to overcome this challenge include (1) offering incentives for faculty, graduate students, and postdoctoral scholars to teach/conduct their research at SDS on the Downtown Campus and (2) establishing an SDS 'spoke' location in the main library and supporting a Data Science Living and Learning Community (honors housing) on the Main Campus.
2. Creating a broad view of the application domains for data science. Most who associate with SDS today come from UTSA's long-standing, highly regarded [cybersecurity education programs and research centers](#). In fact, data science and cybersecurity are often conflated at UTSA. Locating SDS and the NSCC in the same new building in some ways hardens the very desirable and impactful association – but also can limit other application domains to see themselves in scope of SDS. Current plans call in developing strategic messaging about the school; launching internal and external communications campaigns; and issuing fellowship calls to all colleges/departments.
3. Balancing the expectations for SDS as integral to UTSA achieving R1 status and to San Antonio growing its start-up community and workforce. The weight of the first expectation is for SDS to lead convergence and interdisciplinary research for the enterprise, primarily at the graduate level and above and to increase the national impact and prominence of the university. The weight of the second is for SDS to meet the intense local demand from regional employers to focus on (primarily undergraduate) workforce development. Both expectations must be met amidst concerns of gentrification resulting from the economic impact SDS will stimulate downtown. Current plans call for working directly with federal government agencies and national labs with presence in San Antonio, [Greater: SATX](#), San Antonio [Tech Bloc](#) and [Tech District](#), and the UTSA [Westside Community Center](#).