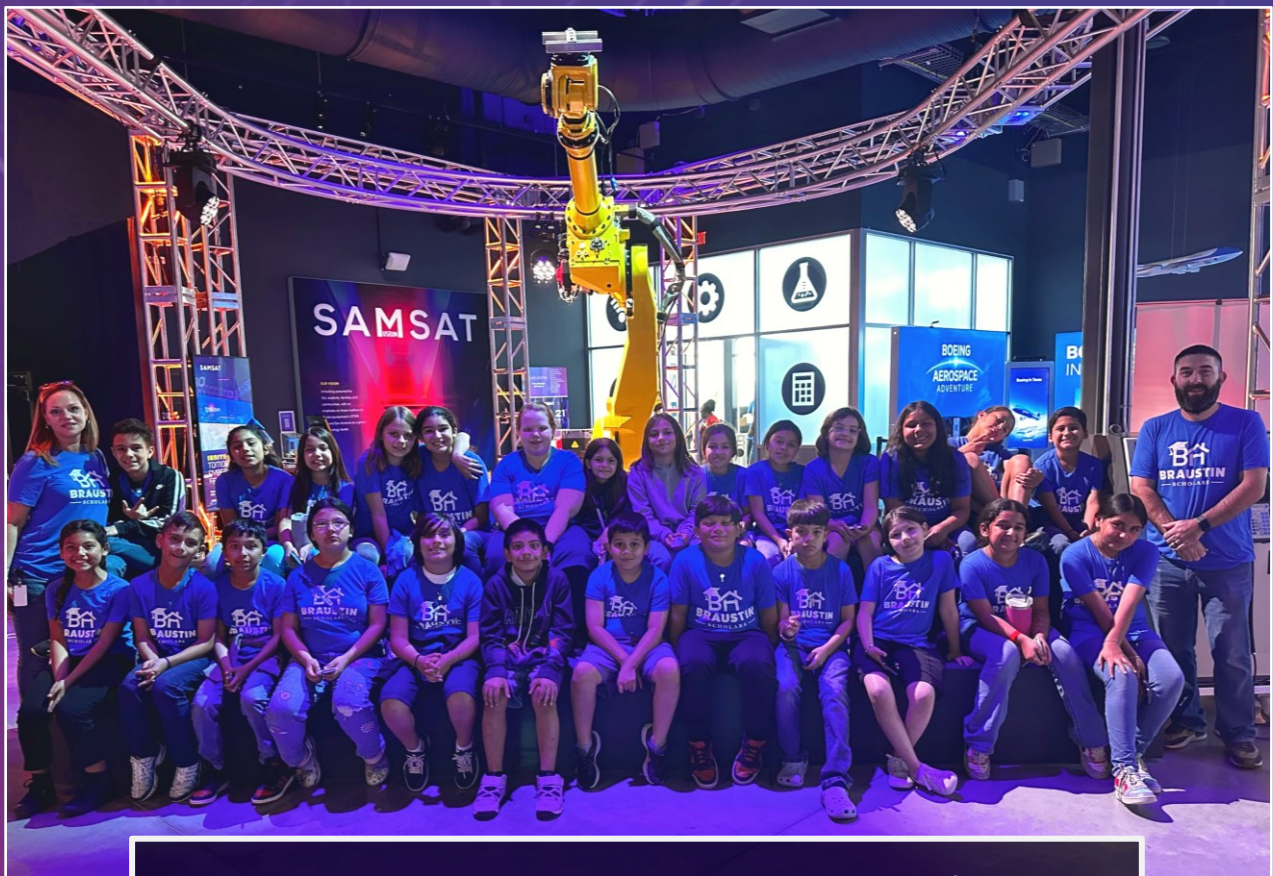




SAN ANTONIO MUSEUM OF SCIENCE AND TECHNOLOGY

2024 ANNUAL REPORT



Braustin Scholars at SAMSAT AREA 21®



Above: eVTOL Flight Simulator in SAMSAT AREA 21®.

Below: R20 Premier Esports Grand Final.



FROM OUR CHAIRMAN & CEO



I am pleased to report a highly successful 2024, with continued growth, new programs, new collections, and ongoing development of local and national partnerships that advance our mission of unlocking potential for students, families, and communities.

SAMSAT AREA 21®, in the Boeing Center at Tech Port, is our flagship location and center of activity—and of inspiration! Our investments in AREA 21 activities and exhibits continue to deliver. 38,000 students and guests experienced the benefits and promise of 21st century technology. Our exhibits cover space, aerospace, cyber, robotics, advanced manufacturing, energy, and health. We expanded interactive aerospace activities, and we will soon launch our self-guided tour and our STEMPhone exhibit, a “forest” of giant cell phones that highlight the transformational power of technology. We remain open seven days a week, and we continue the extraordinary policy of free admission to the public.

SAMSAT’s educational portfolio saw major additions. With support from the City of San Antonio Department of Human Services, we launched 21AFTERSCHOOL, our first afterschool program. 1,101 unique students made a collective 4,901 visits to SAMSAT. Through support from DoD STEM and the Defense STEM Education Consortium (DSEC), we will deliver 70 field trips yearly at no cost to schools or students. DSEC also supports the R20 Premier Esports League, which now sees 300 students join us monthly for competition and learning in the Boeing Center. With support from Firstmark Credit Union, we launched the first cohort of the SAMSAT Educator Fellows Program. And our National Science Foundation program, *Intern R&D at the Science Center*, has 20 local college students building exhibits supported by our outstanding IEEE mentors, with these students learning important skills and building their professional network. SAMSAT hosted an additional 36 interns—that’s 115 interns since 2021!

SAMSAT’s permanent museum collection continued to receive world-class gifts: a collection of mainframes from IBM Europe, a robust computer history archive, more lighting artifacts, and stay tuned for a major aerospace historical display of an international space mission (details are classified!). We continue to progress toward opening our Computer History and Energy History Exhibits, incorporating these new artifacts in ways that will engage students and visitors.

None of this would be possible without the robust and long-term support we receive from Port San Antonio, the Kelly Heritage Foundation, Boeing and the many other sponsors and donors who make our work possible. Join us in thanking all our partners who are making a difference in San Antonio and beyond. They are our spark for Inspiration, Innovation and Invention at SAMSAT.



A stylized, handwritten signature in white ink that reads "D.A. Monroe".

David A. Monroe
Chairman and CEO

A SCIENCE AND TECHNOLOGY MUSEUM FOR SAN ANTONIO

In 2014, a whitepaper was written about developing a science and technology museum for San Antonio. At the time, our city was the largest in the United States without a technology-focused museum.

In 2015, SAMSAT launched as a prototype.

In 2017, the SAMSAT Preview Center opened at Port San Antonio.

In 2020, the SAMSAT Education Center opened at Port San Antonio.

In 2022, SAMSAT opened SAMSAT AREA 21® at the Boeing Center at Tech Port, celebrating 21st century innovations.

In 2024 SAMSAT, San Antonio's science and technology museum, served 24,567 students and 36,402 total visitors.



Left: The prototype museum at e-Watch Corporation.

Below: Mayor Nirenberg during the SA Smart Mayor's Challenge, in the SAMSAT Preview Center at Port San Antonio



OUR HOME

PORT SAN ANTONIO

THE BOEING CENTER AT TECH PORT



18,000 jobs. Aerospace, aviation,
advanced manufacturing, robotics, and more.



SAMSAT AREA 21®

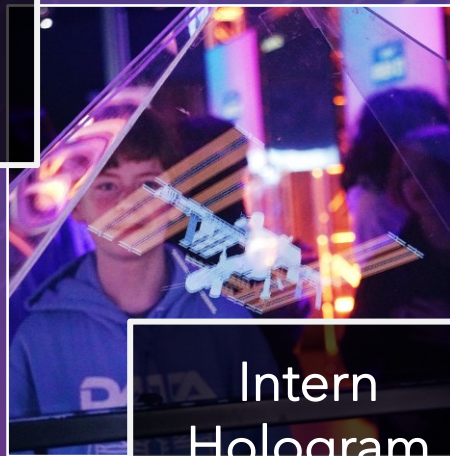


Since opening in August 2022, SAMSAT AREA 21® has been a hub for 21st century innovation and exploration. Open to the public, it also hosts SAMSAT's 21DISCOVERY™ field trips and a wide range of student-focused programs. Visitors encounter factory robots, an autonomous car, Cyber City, Cyber and Space Operations Centers, Moon 3D printing, Tesla coils, medical technology, the Boeing Aerospace Adventure, and more!





Factory Robot



Intern Hologram



Datapoint 2200
The world's first desktop PC



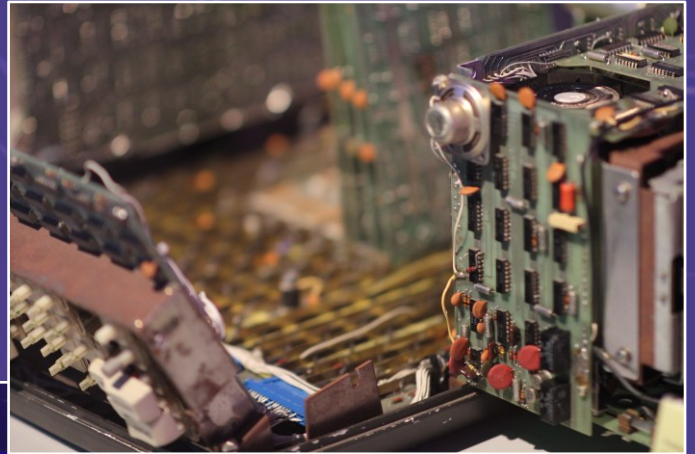
Student Docent



SwRI
Autonomous Vehicle

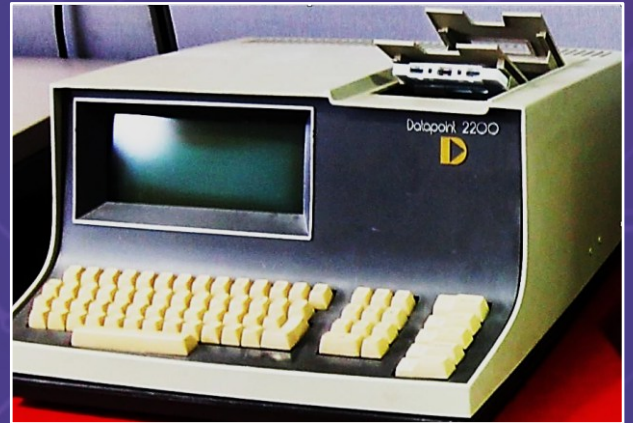
COLLECTIONS

SAMSAT holds world-class collections in the fields of computers, electricity, electronics, radio, lightning, space, energy, and more. SAMSAT staff and volunteers work to catalog, restore, and maintain artifacts for current and future displays in SAMSAT spaces.



THE DATAPOINT COLLECTION

SAMSAT holds the official historical archive for Datapoint Corporation. Founded in San Antonio in 1969, Datapoint was a Fortune 500 company at its height. The lineage of Intel processors traces to work at Datapoint (at the time, Computer Terminal Corporation), as do many personal computer innovations, such as local area networks (Arcnet) and distributed computing (Resource Management System—the RMS operating system). IEEE Region 5 recognizes the Datapoint 2200 as the world's first personal computer.



2024 ATTENDANCE

MUSEUM AND PROGRAMS

36,402

STUDENTS

24,567

EVENTS

874



ADULTS

11,835



WHO WE SERVED IN 2024

School Systems Served

Anne Frank Inspire Academy
Bexar County Academy
Comal ISD
Compass Rose
East Central ISD
Edgewood ISD
Essence Preparatory
Fort Sam Houston ISD
Harlandale ISD
Harmony Public Schools
Hondo ISD
IDEA Public Schools
Jubilee Academies
Judson ISD
Karnes City ISD
KIPP Public Charter Schools
La Vernia ISD

Lackland ISD
Medina Valley ISD
North East ISD
Northside ISD
Poteet ISD
Randolph Field ISD
San Antonio ISD
Schertz-Cibolo ISD
School of Science & Tech
Seguin ISD
Somerset ISD
South San Antonio ISD
Southside ISD
Southwest ISD
St. Mary's Hall
Uvalde ISD
Winston School

Other Clients, Partners, Guests

688th Cyberspace Wing
Alamo Colleges
Alamo Rocketeers
Alamo STEM Ecosystem
Boy Scouts
Boys and Girls Club
Catholic Charities
Children's Light House
City of San Antonio Intl Office
City of San Antonio Parks & Rec
Jack & Jill of America
Palo Alto College
Salvation Army
San Antonio College
San Antonio Greater Chamber
San Antonio Hispanic Chamber
San Antonio Parks and Rec
Scobee Education Center
St. Philip's College
Texas A&M University-San Antonio
Texas State Technical College
United Way
Upward Bound
UTSA





EDUCATION

SAMSAT's education programs serve students from elementary school to college. We host field trips, conduct outreach at schools, run afterschool programs, run summer camps, host interns, and operate special programs supported by our sponsors.

In all our programs, we're guided by this strategy:

INSPIRATION

Open students' eyes to possibilities they had not considered before.

ENGAGEMENT

Hands-on, so students can experience what STEM is like.

PATHWAYS

Every time we see students, highlight pathways to local STEM education programs and careers.



21DISCOVERY™

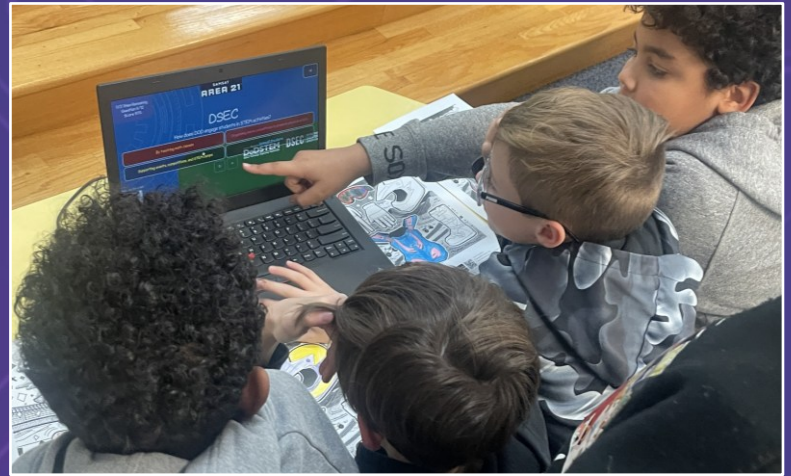
Classes at SAMSAT AREA 21®

21DISCOVERY™ classes bring students onsite for an interactive tour and hands-on experiences in fields like cybersecurity, aerospace, robotics, coding, energy, and advanced manufacturing. Each visit connects students with local education pathways and career opportunities in San Antonio.



Defense STEM Education Consortium (DSEC)

SAMSAT is the regional content partner for the Defense STEM Education Consortium (DSEC). DSEC will fund 70 field trips and is the lead funding sponsor for R20 Premier Esports. SAMSAT co-leads the Alamo STEM Ecosystem with partner IDRA., who leads DSEC's Alamo Hub.



Robots at school campus



R20 Premier Esports

R20 is SAMSAT's free-to-play esports league for students in the San Antonio area, with over 500 competitors from 35 schools battling for the championship title. Under SAMSAT's direction, the league is managed by Texas A&M–San Antonio interns and powered by the NASEF model to promote learning outcomes in tech, teamwork, and more.



Production Interns

Team and individual game play

Shoutcasting

Intern R&D at the Science Center



U.S. National
Science Foundation

SAMSAT is working with twenty college students from UTSA, Texas A&M University-San Antonio, St. Mary's University, and Trinity University. Students are building museum exhibits with support from IEEE mentors. Students will learn 21st century skills and expand their professional networks, as SAMSAT studies the role of science centers in internships.



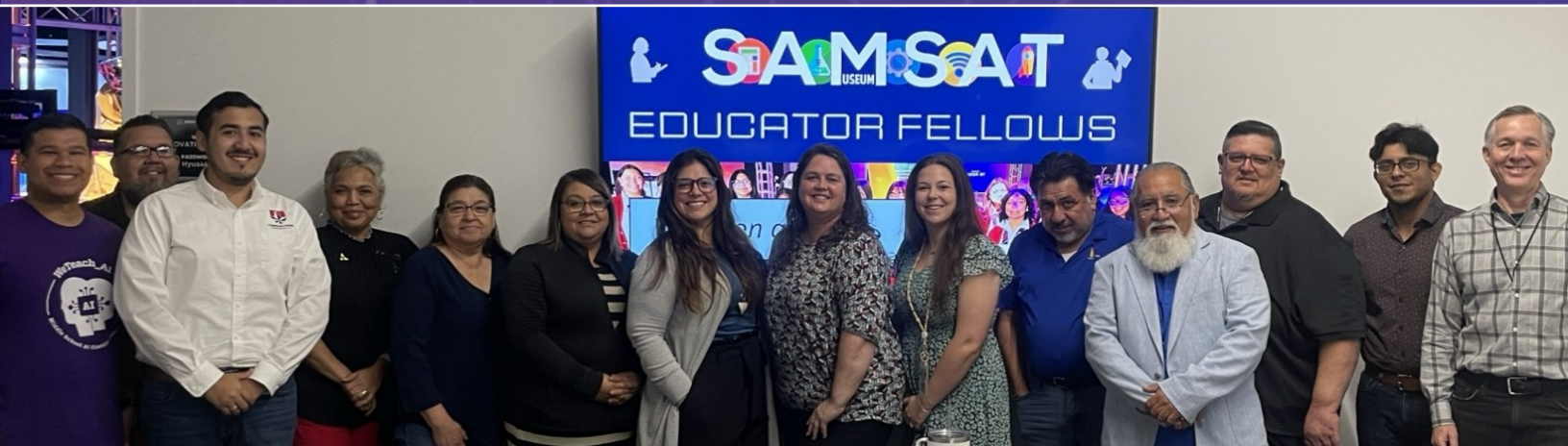
This work is supported by U.S. National Science Foundation Award Number 2417095: Intern Research and Development at the Science Center: Exploring Roles and Learning as Students and Mentors Build High-Tech Exhibits.

SAMSAT Educator Fellows

Sponsored by Firstmark Credit Union



PBL Training and Mentorship for K-12 Educators



The **SAMSAT Educator Fellows** program is a school-year-long professional development experience designed to equip teachers with the skills and confidence to implement Gold Standard Project-Based Learning (PBL) in their classrooms.



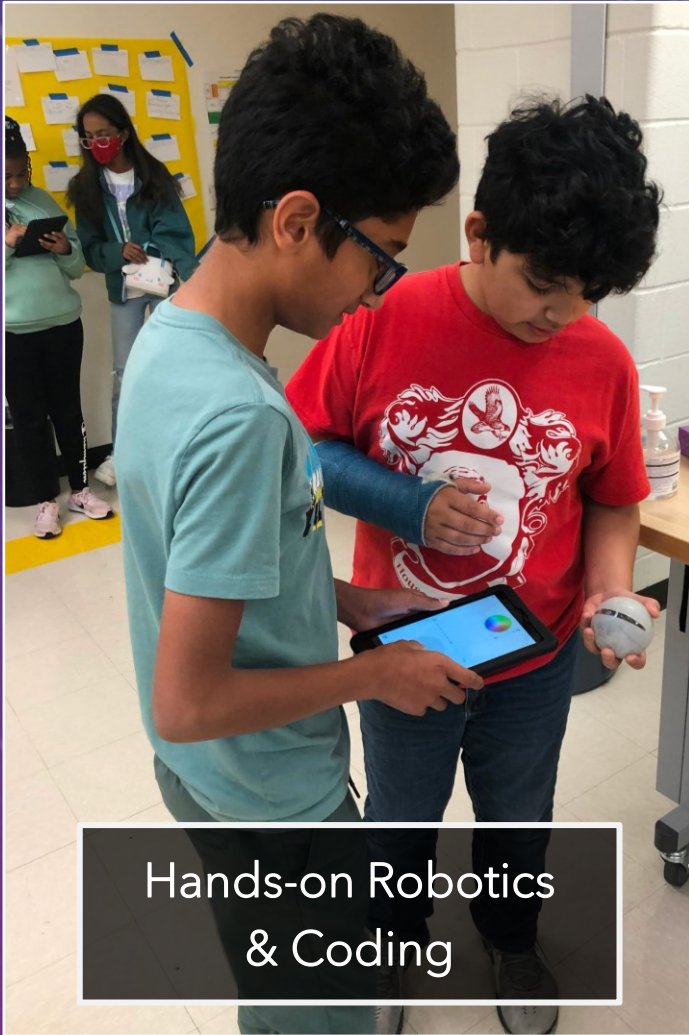
Left: Teachers at work!
Right: SAMSAT staff at graduation



Boeing STEM Academy



With long-term support from The Boeing Company, students in SAMSAT's Boeing STEM Academy participate in a 12-session course where they learn to think like engineers. They graduate with a certificate, a digital badge for their resume, **and a personal laptop.**



Hands-on Robotics
& Coding



Student Final
Presentation



Boeing at
Graduation



Certificate and Laptop Award!

21AFTERSCHOOL™

The City of San Antonio, Department of Human Services sponsors SAMSAT's 21AFTERSCHOOL program, which brings students from Title I schools to SAMSAT AREA 21® for hands-on classes in cybersecurity, IT, space, esports, robotics, advanced manufacturing, and AR/VR.



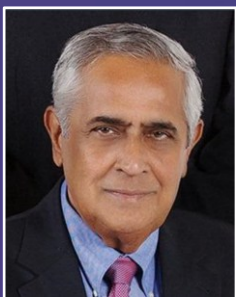


SA Smart: The Mayor's K-12 Smart City Challenge



In its seventh year, the SA Smart Mayor's Challenge invited middle and high school students to tackle real-world issues through research and innovation. Guided by a theme from the SA Tomorrow Plan, teams identified local challenges, conducted technical and market research, and presented their solutions in a pitch deck competition, supported by expert mentors. **Winning teams were awarded the SA Smart Mayor's Cup!**





T. J. Natarajan Summer Camps

Named in memory of SAMSAT Board Member T. J. Natarajan, we hosted 19 summer camps over seven weeks in 2024, offering hands-on experiences in cybersecurity, rockets and space, video editing, robotics, website design, game design, graphic design, music tech, and Minecraft.

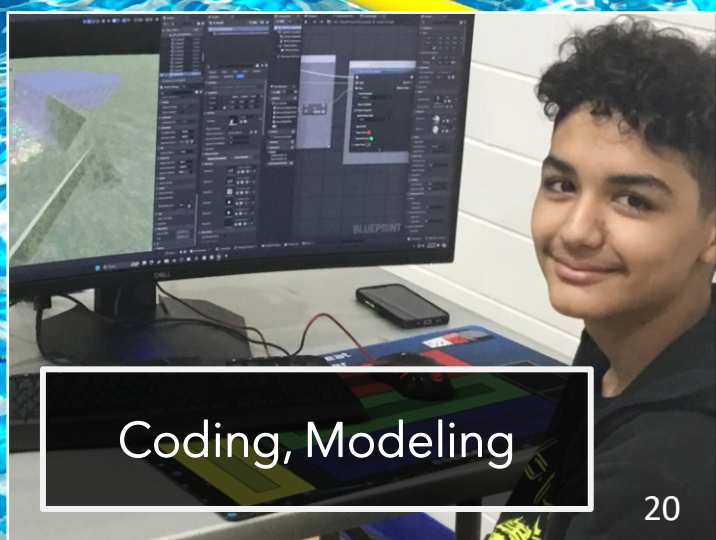
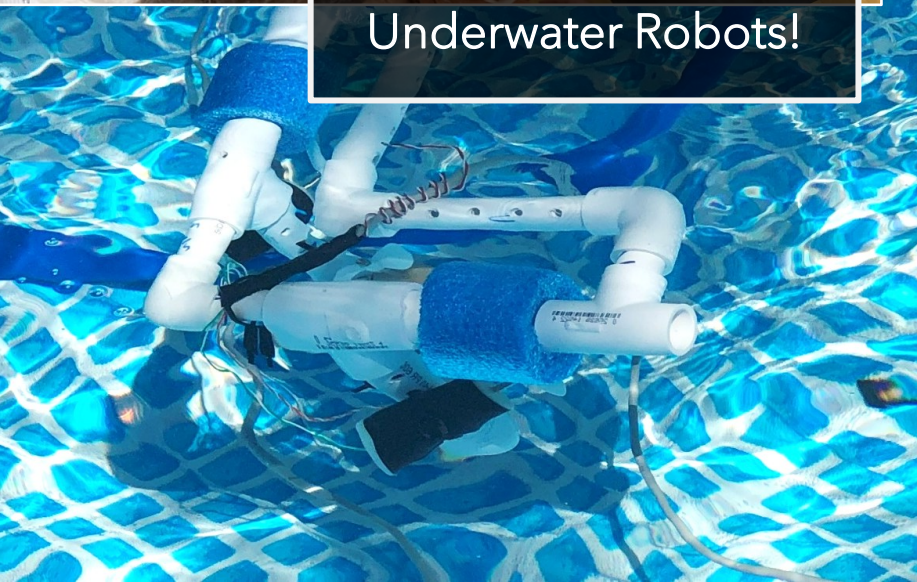
These camps were made possible through support from the City of San Antonio's Department of Human Services and many generous donors.



Underwater Robots!



Rocket Launch Day!

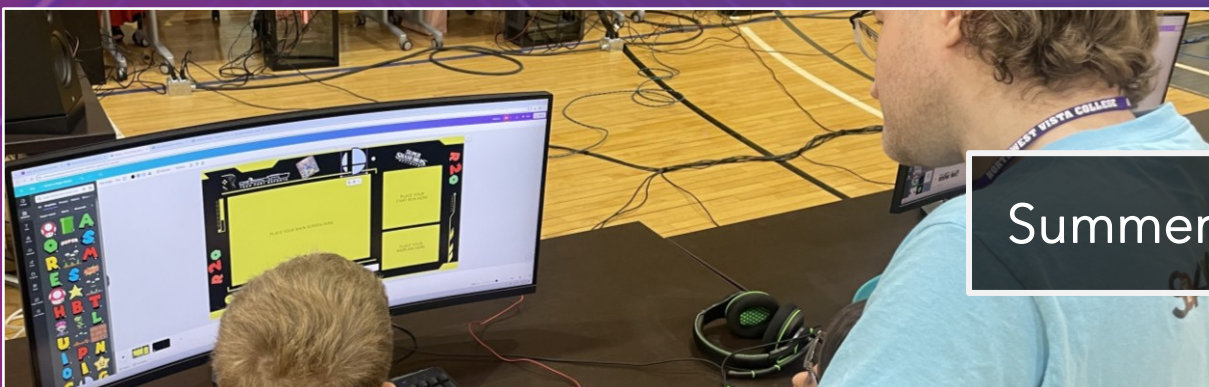


Coding, Modeling

Internships

In 2024, SAMSAT hosted 36 interns from both high school and college. Interns contributed across the organization by supporting activities in SAMSAT AREA 21®, helping develop exhibits and curriculum, assisting with administration, and helping run the R20 Premiere Esports League.

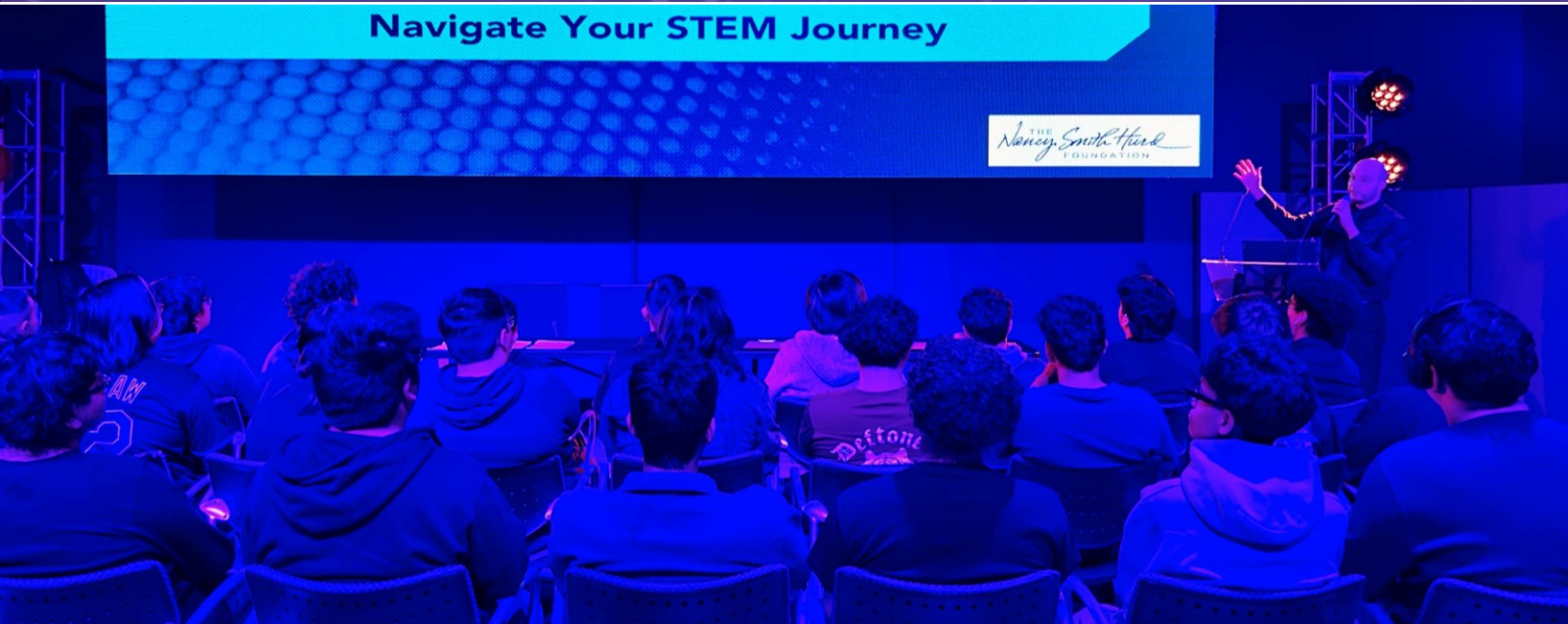
We're grateful to our primary intern partners: Texas A&M San Antonio Esports, Family Service Association, Alamo On the Job, and the UTSA Rowdy Corps program.



Summer Camp Class

SAMSAT Pathways

SAMSAT helped students interested in STEM careers “know the path, walk the path, and celebrate the path!” We mentored 8th to 12th grade students along their STEM pathway, empowering the next generation of innovators and problem solvers!



Program Sponsors:



Joint Base San Antonio-Lackland Cyber Security Operations Center

At SAMSAT AREA 21®, sponsored by JBSA-Lackland, students participated in Cyber Security Operations Center classes and earned digital badges for their achievements.



Smart Energy Education



SAMSAT delivered 21DISCOVERY field trips with support from Smart Energy Education and its sponsors CPS Energy and Itron, Inc. Their support also helped fund the SA Smart Mayor's Challenge.





SAMSAT STEMphone™

IN THEIR WORDS

The Boeing STEM Academy was really fun. I learned about robots and how to make one.

Middle school student, Boeing STEM Academy

We learned about 3D printers, what we are trying to build on the moon, a car that can drive itself, robotic arms and tech that got better, and about planes.

Middle school student, 21DISCOVERY

The museum and activities were outstanding for both my daughters, and I would love [to see them] more often.

Parent, SAMSAT AREA 21® guest

I learned about different efforts to make San Antonio carbon neutral by 2050.

High school student,

SA Smart: The Mayor's K-12 Smart City Challenge

Great class and great instructor. Very knowledgeable and kid friendly.

Parent Chaperone, 21DISCOVERY

IN THEIR WORDS

Mentoring was so valuable. Students felt heard and validated. They were so excited about the ideas and suggestions that they were given!

Educator, SA Smart: The Mayor's K-12 Smart City Challenge

I learned that bridges need good structure and support to hold a lot of weight.

Elementary school student, 21DISCOVERY

I was impressed with the historical objects and the "hands-on" opportunities for students.

Lions Club member, AREA 21® guest

My grandson loved this camp. He learned so much and was engaged in every class he attended.

Grandparent, Summer Camp (Robotics)

I really liked this field trip. [It will] stay as one of my favorites, thank you.

High school student, 21DISCOVERY

Thank you for having our group and being so kind and open with our kids.

Parent Chaperone, 21DISCOVERY



EVENTS

SAMSAT hosted multiple events in 2024, working with Port San Antonio, the Kelly Heritage Foundation, The Boeing Company, and other community partners.

STEMclipse!

We were joined by 725 of our closest friends to watch the April solar eclipse.



21BACKTOSCHOOL



Backpack and school supply giveaway, part of 21AFTERSCHOOL



BOONANZA!

Halloween STEM



Fiesta de los Niños

SAMSAT AREA 21® hosted thousands of visitors throughout the day during Port San Antonio's annual Fiesta event.





RESEARCH

SAMSAT'S programs build on museum and educational research. SAMSAT generates research results in large programs and seeks out research partnerships.

WE BUILD ON RESEARCH

- Historical artifacts illustrating invention and innovation
- Project-based and interdisciplinary learning
- 21st century skills
- STEM career interest
- Education pathways
- Intern and mentor practices
- Esports scholastics and academics
- Cross-sector partnerships

WE ARE INVESTIGATING

- Character development through STEM
- STEM career interest through programs
- City-challenge-based programs
- Educator adoption of pedagogy
- Hyperlocal education pathways
- Intern and mentor practices

SAMSAT
INTERN R&D
AT THE SCIENCE CENTER



U.S. National
Science Foundation

This work is supported by U.S. National Science Foundation [Award Number 2417095](#): Intern Research and Development at the Science Center: Exploring Roles and Learning as Students and Mentors Build High-Tech Exhibits.

OPEN ACCESS PEER-REVIEWED CHAPTER - ONLINE FIRST

Perspective Chapter: Building a Multisector STEM Learning Ecosystem at the San Antonio Museum of Science and Technology

WRITTEN BY

Cliff Zintgraff, Michael Thoennes, Joshua Martinez and Giselle De Leon

Submitted: 23 June 2024 , Reviewed: 02 July 2024 , Published: 13 December 2024

FINANCIALS

Balance Sheet, December 31, 2024

ASSETS

Current Assets

Bank Accounts	76,420.37
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Accounts Receivable	199,694.26
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Other Current Assets	8,564.25
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Total Current Assets	284,678.88
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Fixed Assets	2,132,046.14
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Other Assets	0.00
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TOTAL ASSETS	2,416,725.02
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LIABILITIES AND EQUITY

Liabilities

Current Liabilities

Accounts Payable	30,743.81
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Other Current Liabilities	31,000.00
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Total Current Liabilities	61,743.81
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Long-Term Liabilities	0.00
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Total Liabilities	61,743.81
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Equity	2,354,981.21
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TOTAL LIABILITIES AND EQUITY	2,416,725.02
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FINANCIALS

Profit and Loss

January 1, 2024 to December 31, 2024

Income

Consulting Income - Port SA	180,000.00
Contributions	544,161.70
Earned Revenue	38,925.03
Education Program Fees	290,154.09
Event Revenue	6,625.00
Grants	312,560.99
In-Kind Donation	11,670.00
Rent Revenue	87,396.90
Service/Fee Revenue	5,089.40
Sponsorships	47,500.00
Uncategorized Revenue	7.57
Total Income	\$ 1,524,090.68
Gross Profit	\$ 1,524,090.68

Expenses

Conferences, Conventions and Meetings	\$ 18,999.26
Fees for Services	\$ 132,846.05
Information Technology	\$ 17,059.48
Occupancy	\$ 370,559.75
Office Expenses	\$ 13,006.69
Other Expenses	\$ 805,457.19
Travel Expenses	\$ 2,274.44
Total Expenses	\$ 1,360,202.86
Net Operating Income	\$ 163,887.82
Net Other Income	\$ 1,188.96
Net Income	\$ 165,076.78

OUR TEAM

Board of Directors

David Monroe
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Cliff Zintgraff, Ph.D.
Secretary

Nils Smith, P.E.
Vice-President, Defense and
Intelligence Solutions,
Southwest Research Institute
Treasurer

Walter D. (Walt) Downing, P.E.
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Philip Nelson
President, Nelco Media, Inc.

Dr. Raul "Rudy" Reyna
Founder, Alamo STEM Ecosystem

Alfred Taylor, Ph.D.
CEO, Systems Integration

Senior Staff

David Monroe
Chief Executive Officer

Cliff Zintgraff, Ph.D.
Chief Learning Officer

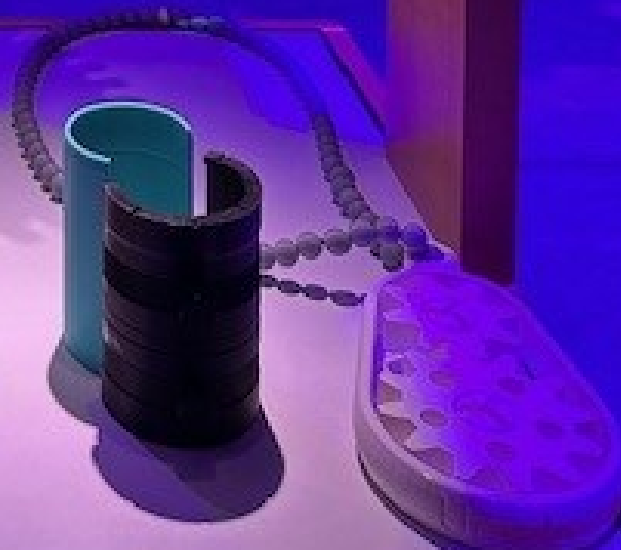
Sandra Shreve
Operations Manager



Thank You SAMSAT Sponsors!



Large 3D Prints
In SAMSAT AREA 21®



CYBER



Our Mission



SAMSAT, the San Antonio Museum of Science and Technology,
unlocks potential
for ALL students, families, and communities.
In the process, we expand San Antonio as a
global technology leader.

Imagine that SAMSAT inspires
1,000 more students to choose STEM each year
and they complete their education
and then a 20-year STEM career.
If we do this for ten years, then...
that's a \$6 billion increase in earnings
transforming
students, families and communities.

*1,000 students/year * \$30,000/year* * 20 years – repeated for 10 years = \$6 billion*



San Antonio Museum of Science and Technology

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