



Annual Report

2021-2022



Computer Science Teachers Association

Letter from the Executive Director

I know I say this every year, but what a great 2021–22 program year it was for CSTA! After over two years of all-virtual community building and program implementation, our community finally came together in July for the largest in-person CSTA conference ever. Nearly 70% bigger than our 2019 conference, CSTA 2022 was the perfect capstone to an outstanding year for the organization, allowing us to experience the impact of this community with all of our senses and not just through a computer screen.

Beyond the conference, our 2021–22 program year was a success for CSTA, with continued growth and depth of impact across all programming. We saw over 30% growth in the number of participants in CSTA-created PD, grew the Equity Fellowship, developed multiple online courses that launched after CSTA 2022, and saw more than 10% growth in the number of chapters that meet minimum requirements. Our two EIR grants got into full swing, with the first complete year of CSforEL PD a success, and over 500 teachers participating in CSPDWeeks in Indiana and South Carolina. Honestly that just scratches the surface! Please take some time to review the full report to see more details about the incredible impact CSTA has had over the last year.



Jake Baskin | CSTA Executive Director

Building Community



CSTA Chapters

CSTA currently has

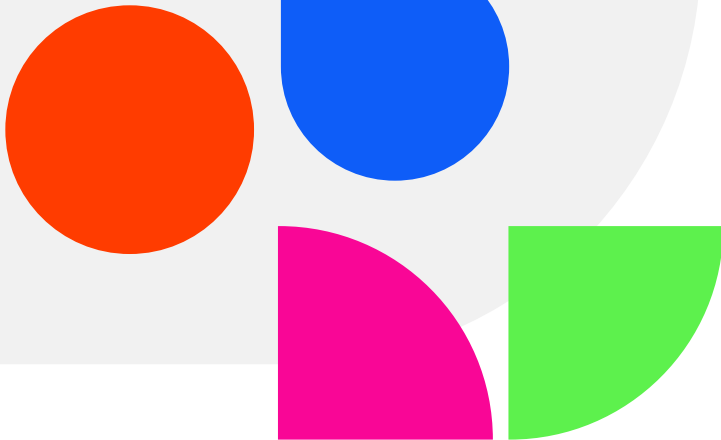
100 active chapters,
with

11,165 total chapter
members and

608 total chapter
leaders

In 2021–22, 4 new chapters formed: Singapore, South Dakota, Greater Los Angeles, and Virgin Islands.

Of the 2,561 chapter members that responded to the second annual Chapter Feedback Survey, **78% were satisfied** with the activities of their chapters, 82% of members responded that they have “someone or some way to ask questions and receive support,” and 87% reported that their perspectives are “welcomed and honored” in their chapter.



Building Community

Virtual Communities of Support

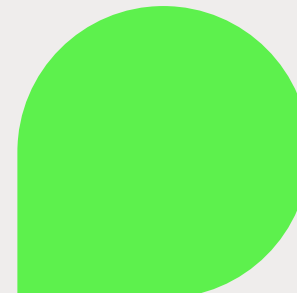
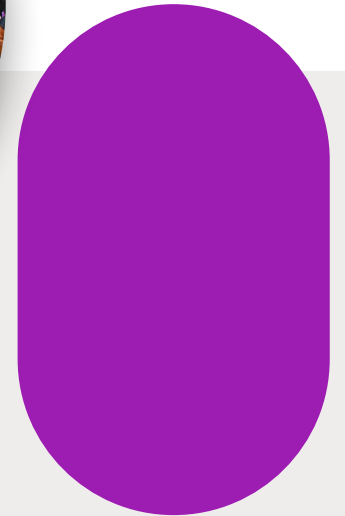
Our vibrant, thriving virtual community space added 12 unique affinity groups, including four identity-based affinity groups (AAPI Affinity Group, Black Affinity Group, Latinx Affinity Group, and CSTA Pride).

The total number of active users more than doubled, growing from

2,300

4,750

active users



Building Community

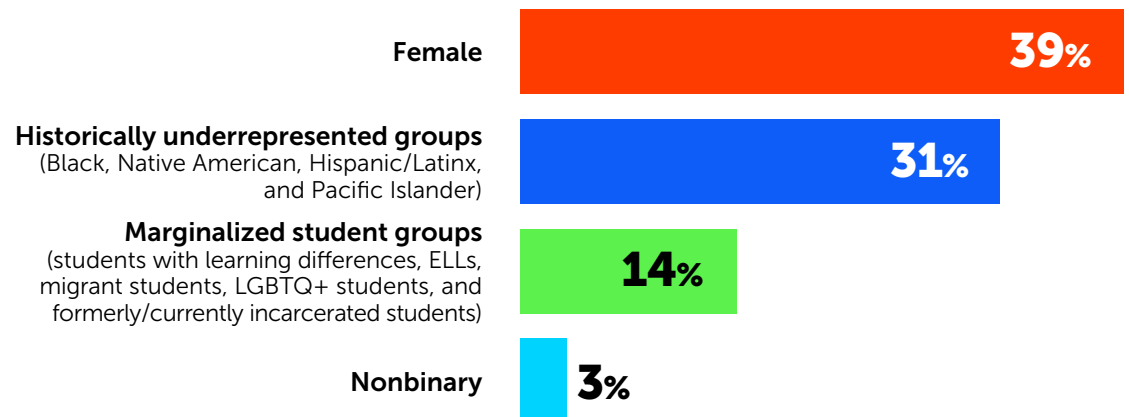


Computer Science Honor Society

CSHS grew by 16 active chapters throughout FY2022, with **3,262 total CSHS members** (an average of **26 members per chapter**). A quarter of chapters are located at Title I schools, and over a thousand graduating seniors plan to major in CS.

CSHS chapters completed over **20,000 total service hours**, with an average of 183 hours per chapter. We launched a new advisor toolkit to support new and existing chapters and improved end-of-year reporting to learn more about what each chapter accomplished.

Chapter member demographics reflect the growing diversity of CS education:



Building Community

CSTA+ Membership

CSTA finished the 2021-2022 program year with **over 19,000 members**, including over **4,300 CSTA+ members**.



In 2022, CSTA launched a new value proposition highlighting the wide array of unique and valuable benefits the organization offers to CSTA+ members.

CSTA+ benefits include on-demand PD courses, resources and discounts to help teachers achieve certification, opportunities for teachers to be recognized for their work, and resources to support classroom instruction.

Your place to **belong**, **grow** as a CS teacher, and **impact** your classroom and beyond.

- ✓ **Join the world's largest CS department**
 - Connect with over 19,000 CS teachers from around the globe
 - Find strength in your local community
- ✓ **Engage with PD you actually want to attend**
 - Learn year-round at monthly bite-sized PD events, biannual summits, and our annual conference
 - Customize your learning with our library of peer-created, Standards-aligned content to meet your needs
- ✓ **Lead beyond your classroom**
 - Impact students and teachers on a broader scale
 - Share your expertise with a global community of educators by serving on a committee or presenting at CSTA events

CSTA Awards

CS Teaching Excellence Awards

CSTA and Infosys Foundation USA expanded the CS Teaching Excellence Awards beyond **15 national winners** to recognize an additional **18 teachers at the regional level**. Regional winners received a stipend, and chapter grant funds were provided for celebration events, which built community among members and honored the accomplishments of local winners.



CS Teaching Excellence Award Winners

National winners

Nicholas M. Bousquet
Yolanda Kol
Adam Lueken
Melanie Haley Olson
Khamphet Pease

Samuel K. Puich
Agustin Sarmiento
Devon Senneseth
Timothy Clifford Swick
Catherine Tabor

Honorable mentions

Tonya Coats
Taghrid El Meliguy
Annie Kelly
Mark Nechanicky
Adam S. Riazi

Regional winners

Minnesota
Tina Kude
Whitney Determan
Josephine Winter

Arizona
Jill V. Jones
Pradip Misra
Jessie L. McKinley

Indiana
Mark Snodgrass
Amy Fletcher
Genevieve
McLeish-Petty

Wyoming
Melissa Price
Sharon Seaton
James Cunningham

South Carolina
Sarah Tooley
Denise Wright
Robin L. Jones

New England
Nicole (NJ) Rivilis
Allison Braley
Laura Peters

CSTA Awards

CSTA/ACM Cutler-Bell Prize

Awarded by CSTA and the Association for Computing Machinery (ACM), the Cutler-Bell Prize in High School Computing recognizes high school student projects or artifacts that engage modern technology and computer science. The **4 winners** of the 2021–22 award offered innovative approaches to collaborative energy savings, waste classification and management, MR image capture, and water security.



Harshal Bharatia



Yash Narayan



Shoumik Roychowdhury



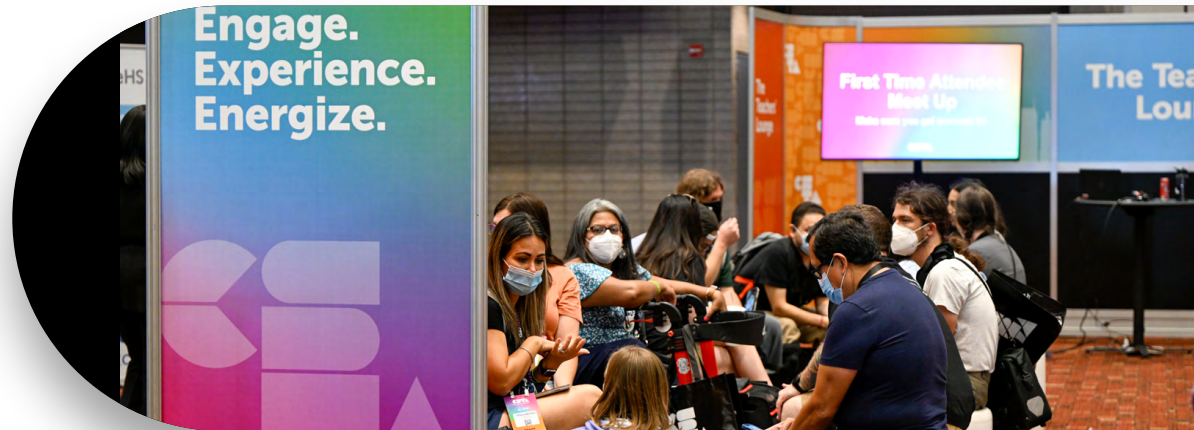
Hiya Shah

Providing Professional Learning

Engage Teachers Directly in Ongoing PD Provided by CSTA

CSTA 2022 Annual Conference

CSTA hosted an in-person annual conference for the first time since 2019! The event was a great success, and we're proud of being able to come back together safely. The conference allowed us to engage deeply with our community in person and inspire them in their work. For more detailed information about the conference, check out the 2022 Conference Annual [Report](#).



Key metrics:

1,553 onsite participants

97.7% felt connected to a community

99.2%

99.3% were satisfied with the conference

99.4% felt inspired & energized

believe CSTA pushes education to focus more deeply on equity and inclusion

Providing Professional Learning

Summits

CSTA hosted three distinct virtual summits this past year: **Cultivating a Community of Learners, CS Across the Curriculum**, and the returning **Equity in Action** summit, led by CSTA Equity Fellows.

Key metrics:

705
total participants

99.2%
attendee satisfaction



Online PD Modules

Designed flexible, self-paced learning experiences courses ranging from 4 to 10 hours in length, are offered in four 10-week terms across the year. Our pilot program launched to CSTA+ members in summer 2022 with **521 enrollees** in two courses:

Identity Inclusion for K-12 Computer Science Educators provides a foundational understanding of one's self, the impact one has on others, and ways to foster safe and inclusive CS learning environments.

Teach Security: The Security Mindset helps high school teachers introduce important cybersecurity principles in their CS classrooms. It provides full lessons with hands-on, inquiry-based activities that allow students to explore core cybersecurity issues for themselves.

I went into the Summit feeling overwhelmed and kind of defeated. I am feeling so much better now. Connecting with my fellow educators and sharing my struggles really helped. I learned some new things and have some great ideas for my classroom. CSTA events never disappoint.

Christopher Evans, 9th–12th Grade Teacher

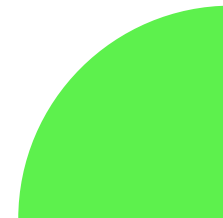
Providing Professional Learning

Engage Teachers in Ongoing PD Provided by CSTA Chapters

This past year, our CSTA Chapters hosted over **535 events**, impacting at least **3,500 unique educators**.

While most teachers found this year to be more challenging than anticipated, we were pleased to see increased activity among CSTA Chapters and a slow return to in-person events. These events included over 65 one- to two-day summits or conferences, 20 PD weeks, and 35 student events.

The most common activities at chapter events were networking, learning about new tools and curricula, equity-focused PD, and professional learning communities. 72% of chapters held equity-focused PD this year. We estimate about **15,000 total attendees** across all chapter events.



Providing Professional Learning

Deliver Outstanding PD

This past year, we held **60 professional learning events** in addition to the CSTA Annual Conference, with **3,309 total participants**.



Across these events,

98% of attendees reported satisfaction

64% of participants were K–12 teachers, with **64%** teaching high school, **47%** teaching middle grades, and **38%** teaching elementary

71% of participants identified as female or non-binary

36% identified as Black, Indigenous, Latinx, Pacific Islander, or another non-white or non-Asian race

Providing Professional Learning

Develop PD Opportunities Focused on Equitable Teaching of Computer Science

CSTA prioritizes equity and inclusion through dedicated programs and as a throughline in all the work we do.

CSTA is a proud partner of the Alliance for Identity Inclusive Computing Education, which seeks to empower the next generation of computer scientists by eliminating systemic barriers. As part of this Alliance, we:

- ✓ Created the online PD course “Identity Inclusion for K–12 CS Educators”
- ✓ Developed chapter inquiry groups, where teachers discuss topics of identity and equity in professional learning communities
- ✓ Hosted monthly professional learning series events and quarterly summits for PD providers
- ✓ Launched a national survey of PreK–12 CS teachers
- ✓ Formed a teacher-led policy committee

Professional Learning Series topics included culturally responsive instruction, accommodations for CS students with disabilities, equitable CS assessment practices, and celebrations of cultural heritage months.

CSTA launched the first year of an equity-focused peer mentorship program in partnership with CSTA Wisconsin Dairyland and WestEd.

The CSTA Annual Conference included **93 sessions (41.7%)** with an **“Equity and Inclusion”** tag, and **57.7%** of sessions were tagged with one of the standard indicators **aligned to equity CSTA Standards for CS Teachers.**

Providing Professional Learning

CSTA Equity Fellowship

The CSTA Equity Fellowship is a selective, year-long program designed to develop leadership in equitable teaching practices and advocacy. The 2021–22 program included **15 CS educators in 12 states.**

Fellows developed collaborative year-long projects, which they presented in keynote sessions on the main stage of the CSTA conference.

- Three-hour PD module on “Implicit Bias in Computer Science Classrooms”

- Facilitation guide and training for CSTA chapter leaders to lead an equity-focused PLC using books like Jane Margolis’s *Stuck in the Shallow End*
- #OneVoice in CS Podcast highlighting the work of BIPOC in computer science and STEM
- Cultivating Genius CS Lesson Series, helping CS teachers plan curriculum using the historically responsive literacy framework laid out in Gholdy Muhammad’s book *Cultivating Genius*

Fellows also wrote articles examining equity in K–12 computer science in the CSTA Voice and hosted and facilitated sessions at the Equity in Action Summit.



Providing Professional Learning

CSPDWeeks

2022 marked the second year of CSTA's Expanded CSPDWeek activities in Indiana and South Carolina funded through an EIR grant from the US Department of Education.

CSTA and CSTA Arizona received funding from Infosys Foundation USA and the Arizona Community Foundation, as well as staffing support from the Arizona Department of Education, to host a CSPDWeek in Phoenix, Arizona.

- This in-person event included **8 workshops and 100 teachers**
- Exit surveys indicated that all participants found the experience meaningful and expanded their CS knowledge. 97.7% of participants felt that they had become part of a CS educator community



Indiana hosted its first annual Indiana CSPDWeek, with support from CSTA, CSTA Indiana, Code.org, Nextech, and the Indiana Department of Education. This in-person event included **8 workshops and 209 Indiana teachers** across all grade and experience levels.



South Carolina held its third annual CSPDWeek, with support from CSTA, CSTA South Carolina, Code.org, The Citadel, and the South Carolina Department of Education. This virtual event included **12 workshops and 312 teachers** across South Carolina.



I pledge ...

to strive to be a model lead learner and educational facilitator who creates an inclusive environment that celebrates diversity and champions inclusion.

#CSBuilds

CSTA continues to expand the reach of CSPDWeek by offering new workshop options each year based on teacher needs, emphasizing teacher choice in the workshop selection process, and supporting other chapters to run their own CSPDWeek events.

Providing Professional Learning

Computer Science for English Learners (CsforEL)

Funded by the US Department of Education’s EIR program, CsforEL is now in its third year of attracting, retaining, and engaging English-language learners in AP Computer Science Principles.

CsforEL has developed instructional materials that make computer science concepts accessible to English language learners and provides teachers with year-long professional development to help them implement these materials.

During the 2021–22 school year, **19 teachers** in Cohort A completed summer professional development. The **9 teachers** in Cohort B began their PD in summer 2022 and will receive follow-up throughout the upcoming academic year.

Feedback has been overwhelmingly positive, with 100% of participants reporting that they were “extremely satisfied” with the program.

It’s probably one of the most valuable PDs I have ever done.

I’ve been really enjoying it and I can see the improvement every lesson cycle. I get so much out of talking with other CS teachers.



Rather than providing a one-time training, CsforEL provides support for teachers that goes far beyond the summer PD program, building a learning community that supports teacher efforts throughout the year.

Independent Guidance

Launch Updated Standards Alignment Process

In a redesigned process, CSTA now validates K–12 curricular materials submitted by a curriculum provider to ensure correct alignment with the CSTA K–12 Computer Science Standards.

A trained group of K–12 CS educators reviews the curriculum and alignment using detailed rubrics for each standard. They reach consensus to determine that the curriculum is fully aligned, partially aligned, or not aligned to each standard. This alignment is summarized at the core concept and curriculum levels.

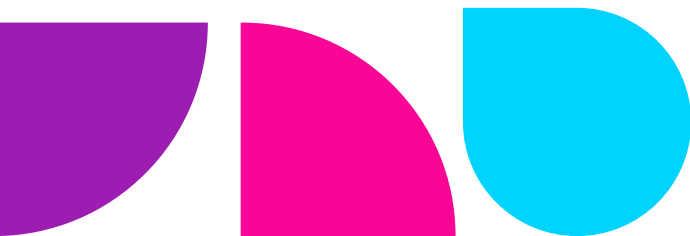
Continue PD Review Process

With the help of our volunteers, CSTA continued the process of reviewing and displaying high-quality professional development and curriculum programs for K–12 CS teachers.

- CSTA and our volunteers completed **23 reviews** of CS professional development and curricula between July 2021 and June 2022. **9 new programs** were accredited and added to CSTA’s [website listing](#) of high-quality PD and curricula
- We also began the process of reaccrediting programs that were originally reviewed two years ago, to ensure that all programs stay updated on our website, and that they continue to improve and meet our standards for high-quality PD. **7 programs** were reaccredited so far, with more coming later in 2022

The teacher-led [policy committee](#), established in February 2022, has held five meetings this spring, in which it worked on the following goals:

- Adopted and endorsed the Code.org Advocacy Coalition’s nine policies for Making CS Fundamental
- Recommended and selected questions for the CSTA Teacher Landscape Survey
- Created a draft teacher advocacy toolkit to train leaders to support state and local CS policies, then presented the draft toolkit at the Chapter Leadership Summit and the CSTA Conference



Independent Guidance

Establish and Run CSEdWeek

Led by CSTA, Computer Science Education Week is an annual call to action to inspire K-12 students to learn computer science, advocate for equity, and celebrate the contributions of students, teachers, and partners to the field.

CSEdWeek 2021's theme was #CSEverywhere, highlighting the relationship of computer science to a wide range of subjects, industries, and career paths

This year, the 2021 CS Heroes were heavily featured in our programming and educational resources. This diverse group exemplifies how CS impacts almost every field and allows students to see themselves as computer scientists. Each hero has a webpage where you can learn more about them and their work, watch a featured video, and experience additional resources, articles, and activities.

Fast facts:

5 events across **4** days

1,282 event participants

260,435

total page views, increasing from **123,472** in 2020

CSEdWeek

Fig creates models using data collected from satellites in outer space to help learn about and solve problems on Earth.

Computer science is transforming space exploration!



Fig O'Reilly
Systems Engineer

#CSEverywhere

Operational Foundation

Raise Corporate and Foundation Funding

CSTA significantly increased its fundraising and sponsorship commitments from the previous year. As communities and businesses reopened and prioritized PreK–12 education, we remained nimble in our partnership offerings.

CSTA launched its DEI and anti-racism partner inventory to evaluate partner alignment to organizational values and goals.

This growth has allowed CSTA to deepen its impact by expanding its core programming.

\$3M

in short and long-term commitments thanks to dozens of strategic and new year-round partners

50%

growth in conference partnerships

58%

growth in sponsorship commitments



Operational Foundation

Thank You to Our Year-Round Partners

Strategic Partners:



Partners:



Operational Foundation

2022 CSTA Annual Conference Partners

AIClub
Amazon Future Engineer
American College of Education
Apple
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CodeCombat
CodeGrade
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Prodigy Learning
Project Lead The Way
Project STEM
Raspberry Pi Foundation (Hello World Magazine)
Replit
Rex Academy
Robolink
Robotical
SAM Labs
Seesaw
SES Robotics
Shopify/Dev Degree
Skill Struck
Sphero, Inc.

Start Engineering
STEM Education Works
Texas Instruments
The AI Education Project
The Coding School
The College of St. Scholastica & The National Center for Computer Science Education
The Learning Partnership
The University of Texas at Austin - WeTeach_CS
Thunkable
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Unruly Studios
Uplifting Technology Inc (CreatiCode)
UTeach Computer Science
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Operational Foundation

Institutional Partners

A+ Computer Science

American Computer Science League

Apple Education

Auburn University

BirdBrain Technologies

Black Girls Code

Blackbird Code

BloomBoard

BootUp PD

Certiport, a Pearson VUE Business

CMU CS Academy

Code Ninjas

Code4Kids

CodeGrade

CodeGym Online Java Programming Course

CodeHS

Codelicious

Codementum

CoderZ

codeSpark

CodeVA

Coding Rooms

Codio

CodeWizardsHQ Inc

CompuScholar, Inc.

Creaticode

DataCamp

EiE, Museum of Science

Excalibur Solutions STEM Academy

Florida Virtual School

Goodheart-Willcox Publisher

Halls of Learning

Krause Center for Innovation

Mad-learn

NAF

National Center for CS Education

National Cryptologic Foundation

NCWIT

North Carolina DPI

PaTTAN

Phidgets Education

Popfizz

Prodigy Learning

Raspberry Pi Foundation

Rex Academy

Robotical

Rosen Classroom

Sacramento County Office of Education

Shopify

St. Catherine University

Stanford University – Computer Science Department

Stockton University

Teach Cyber

Texas Advanced Computing Center (TACC) at UT Austin

Texas Instruments

Twilio

UCLA

Unity

University of Alabama

University of Cincinnati Online

University of DE

University of Maryland – Baltimore County

UNT CSE

Upperline Code

UTeach Computer Science

Veritas AI

Virginia Tech Computer Science

Wyoming Department of Education

Operational Foundation

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Kristeen Shabram
K-8
Representative



Charity Freeman
Appointed
Representative



Janice Mak
At-Large
Representative

CSTA would like to give a special thank you to our Board Members who completed their terms during this time:

Shanti' Coaston
9-12 Representative

Natasa Grgurina
International Representative

Hai Hong
Partner Representative

Janice Mak
At-Large Representative

Monica McGill
College/University
Representative

Jane Prey
ACM Representative

Jennifer Rosato
Past Board Chair

Kristeen Shabram
K-8 Representative



Operational Foundation

CSTA Team



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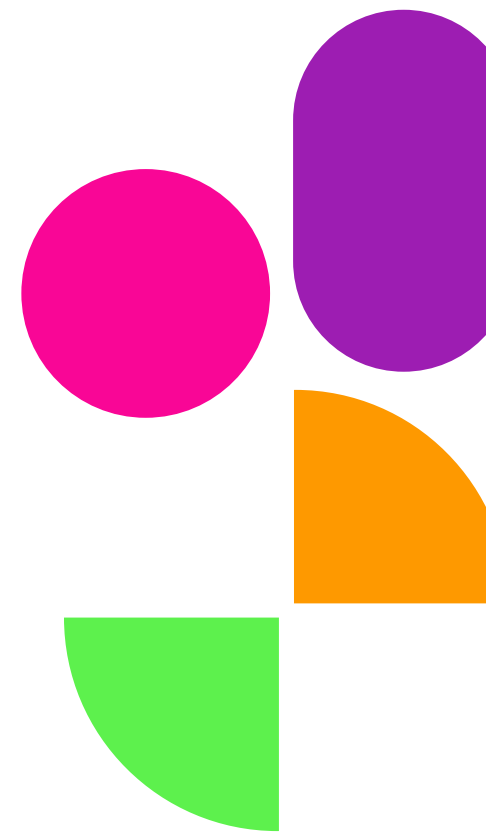
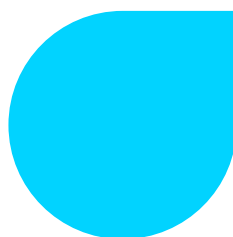
Kimberly Cruz
Membership Services
Specialist



Katie Snyder
Grants Administrator



Dana Weingartner
Event Manager



**At CSTA we believe
that every student should
receive a high quality K-12
computer science education,
and that this is only possible
in a world where every student
has an effective computer
science teacher.**

