2023
Year in Review

A Letter from our Founder

As Break Through Tech embarks on another year of groundbreaking achievements, I wanted to take a moment to reflect on the relevance of our work and why now is the time for us to make an even more significant impact. I also want to share some exciting developments and outline our next big bets.

With the explosion in AI in the last year – impacting everything and everyone and profoundly changing how we live and work – there has never been a more important time in the history of tech to be deeply focused on who is at the design and delivery table asking the hard questions about ethics, fairness, and bias. As I have said before, our first line of defense against concerns about the impact of AI on society is the diversity of the people who are at the table when the product and technology decisions are being made.

That's why I am so proud that j*ust two years after launching our Break Through Tech AI program, we are now the largest program in the nation focused on ensuring gender equity in AI.* We were thrilled to welcome _Allie K. Miller_, one of the most influential thought leaders in AI, to address more than 500 amazing Break Through Tech AI students at our 2023 national AI Studio kickoff event in August.

The year 2023 shaped up to be a pivotal time in our journey. We kicked it off by bringing the entire organization together in person for the first time, and it was a powerful reminder of the strength and dedication of our nationwide team. We were honored to welcome _Michael Collins_ of _Jobs for the Future_, as a featured speaker for this event. I also had the opportunity to visit nearly all of our sites, witnessing firsthand the incredible work being done across the country. Our students left an indelible impression on me at Grace Hopper, showcasing the incredible talent we're nurturing. This momentum is driving Break Through Tech forward.

What's next? Our big bets for the future are rooted in key learnings from our programs. We were proud to publish a research report done jointly with NACE entitled _"Impact of Career Services on Women Pursuing Tech Careers"_ with some important and surprising results

that only deepened our commitment to providing innovative and customized career/professional readiness skills as part of our core program offering.

Based on these lessons, we know that technical training with industry-relevant tools is crucial, experiential learning is a game changer for students and companies alike, and professional development capabilities are key for early talent. Together, these lead to our ultimate goal: successful internship hires and job placement for students who are so often underestimated and overlooked by standard tech recruitment practices. I am confident that our approach will lead to even more remarkable outcomes – not just for our students but for the application of technology to our world.

In a world increasingly reliant on and impacted by technology, our mission to bridge the gender gap in tech couldn't be more vital or relevant. The future of innovation, business, and society is intertwined with technology. We have a unique opportunity to ensure that women and individuals currently underrepresented in tech play a critical role in shaping that future.

I would like to extend a special thank you our long-time funders who are deeply invested in our work; Melinda French Gates's Pivotal Ventures and investments from the Cognizant Foundation, Verizon Foundation, Ken Griffin, Citadel and Citadel Securities, Hopper-Dean Foundation, and New Ventures Fund. And, to our new funders in 2023 Reboot Representation, Strada Education Foundation, Hearst Foundation, and the Estee Lauder Foundation. Thank you to *our Advisory Committee, whose members have been unwavering in their support for the past three years. Their guidance, wisdom, and dedication have been instrumental in our growth and success.*

As we look ahead, the possibilities are endless. I am excited to see the incredible impact we will collectively make in the world of technology and beyond. Let's continue to break through barriers, inspire each other, and empower the next generation of tech leaders.

Thank you for your unwavering commitment to our mission. Together, we will achieve even greater heights in the years to come.

With deep gratitude and excitement for the future,

Judy

Founder, Break Through Tech

Building Futures in Tech

A Year of Expanding Program Offerings, Cultivating National Partners, and Deepening Student Supports

Collaborating alongside other Break Through Tech Chicago women at Google was a revelation. As a Nigerian-American woman, the narrative often hints that I might not fit or that certain roles demand extraordinary efforts just to be acknowledged. It's a reality I acknowledge, yet **today I stride confidently, recognizing that there's a place for me in the tech world — and I am immensely proud.**

Tomi Okunola illuminates exactly what Break Through Tech offers our students – new opportunities and new confidence as they launch careers in tech.

Tomi is just one of the 6,000+ young women and non-binary students who have taken advantage of the programs Break Through Tech offers – from our flagship Sprinternship™ to our new AI Studio and more. No one can tell the story of Break Through Tech's year better than our students can. Hear more from students like Tomi, Mariam, Grace, Izabella, and others at this link.

By the Numbers

Since Break Through Tech launched six years ago, we've invested nearly $28M to **support academic partnerships and programming** in New York at Cornell Tech and CUNY, in Chicago at University of Illinois Chicago (UIC), in DC at George Mason University (Mason), and University of Maryland College Park (UMD), in Boston at the Schwarzman College of Computing at MIT, in Los Angeles at the Samueli School of Engineering at UCLA, and in Miami at Florida International University (FIU). **This year, we launched a fully virtual option for our AI program to reach more women and non-binary computing students beyond those six markets.**

59%

of our participants

are Black, Latina, Native American, first-generation college goers, or low-income

To date, **over 6,000 women** from **200+ universities** have participated in our programming. Our programs focus on the most underrepresented groups in the tech industry, which is reflected in the demographics of our participants. The vast majority – 90% – are women and non-binary; 59% **are Black, Latina, Native American, first-generation college goers, or low-income. Nearly 200 companies**, from startups to Fortune 10 firms, have partnered with us to deliver high-quality experiences for our students.

Our academic partners in New York (CUNY), Chicago (UIC), the Washington DC area (UMD and George Mason) and Miami (FIU) all **grew the share of women in computing majors**. Significantly**,** during the time that Break Through Tech has partnered with these universities, the number of women enrolled in their computing majors has grown **58**%, far outpacing the growth in the number of men in computing at these institutions. Driving these gains is the growth of new computing majors, new introductory course pathways, and targeted marketing and outreach efforts to showcase the opportunities for women considering tech careers.

Innovative Programs
Grow Their Reach and Impact

Break Through Tech's win-win model helps level the playing field for our students and helps companies achieve their diversity-in-tech objectives. Our innovative programs and solutions provide students with skills, applied experience, internships, and other portfolio-building credentials. We offer industry partners access to the prepared, diverse tech talent pool they seek. We act as a programmatic intermediary helping employers fill their early career talent pools with more female and non-binary candidates from diverse backgrounds and engage their employees in impacting diversity in the tech field.

Over the last year, Break Through Tech offered two major programs – one focused on **Artificial Intelligence** and the other focused on **Computing more generally.** The Computing program includes our flagship Sprinternship™ program, a paid three-week micro-internship during the school year that's proven highly effective in helping young women get paid summer internships in tech. Both programs are growing their reach, impact, and capacity to innovate.

Machine learning and data science resonated with me because **I have a passion for mathematics,** and I like to decode how things work.
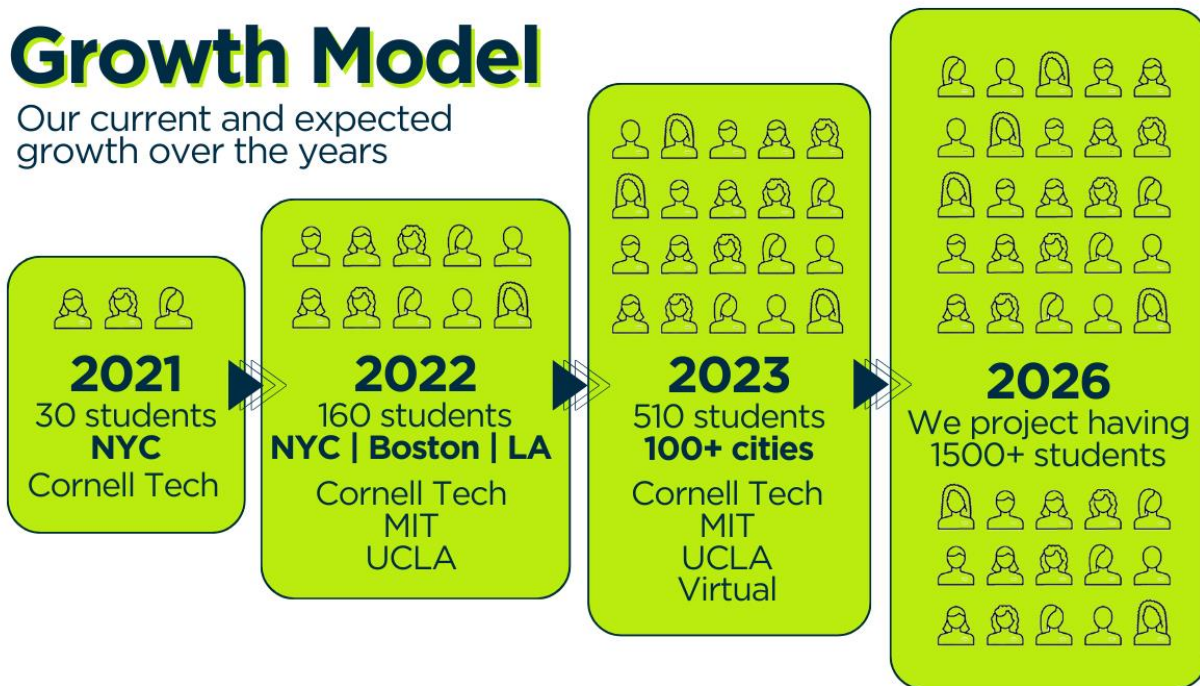
UCLA AI student Taguhi Yenokyan shares a powerful realization she gained from her Break Through Tech experience.

AI Program

The AI Program expanded nationally, increasing student enrollment nearly 3x over the last year. In 2022, the AI program enrolled **177** students across New York, Boston, and LA. In 2023, we enrolled **506** students, of whom 68% are Black, Latina, Pell-eligible, or first-generation college-goers. This summer, the first fully virtual AI program pilot enrolled **63** participants from 44 unique colleges and universities nationwide. This was our most racially diverse to date.

Growth Model
Our current and expected growth over the years

2021
30 students
NYC
Cornell Tech

2022
160 students
NYC | Boston | LA
Cornell Tech
MIT
UCLA

2023
510 students
100+ cities
Cornell Tech
MIT
UCLA
Virtual

2026
We project having
1500+ students

Growing Our Impact. We're thrilled with the results this program is already achieving:

80% of the students who have completed our AI Program in New York, Boston, and Los Angeles over the past two years have successfully landed a summer internship or full-time job in tech, including roles in AI Research, Analytics, Data Engineering, and Data Science.

80%
of Students
in New York, Boston, and Los Angeles who completed our AI Program secured internships or full-time jobs

Now offered virtually – so that any eligible student in the country can benefit – Break Through Tech's AI Program is the largest of its kind in the United States.

If you aren't familiar with our AI program: Our AI program uses an innovative model to **remove barriers between high-tech academic talent and high-potential underserved students**. It democratizes scarce assets – high-quality teaching in an emerging field – through a hybrid approach to learning and practice.

The scarcity of AI talent is a problem of our own making," said Break Through Tech founder Judith Spitz, *"and is, therefore, a problem we can solve."*

Break Through Tech is on a mission to do just that. Our goal is to credential and fast-track undergraduate women into careers in the fastest-growing areas of tech: data science, machine learning, and artificial intelligence – leveraging the academic capabilities of some of the country's most elite universities.

skill-based training

industry-relevant portfolio development

mentorship, career coaching, and job placement support

Developed with industry leaders, the Break Through Tech AI Program includes three high-level components that are considered critical for increasing the competitiveness and marketability of students pursuing AI/ML engineering roles: (1) skills-based training, (2) industry-relevant portfolio development, and (3) mentorship, career coaching, and job placement support.

After completing our program, our students landed summer internships or full-time tech jobs at companies including Accenture, American Express, Bank of America, Blackstone, Meta, Goldman Sachs, JPMC, KPMG, LinkedIn, Merck, Microsoft, NASA Ames Research Center, Salesforce, Slalom, and more.

Last year, we significantly expanded the AI program through three top-ranked **"hub"** universities – Cornell Tech, the MIT Schwarzman College of Computing, and UCLA's Samueli School of Engineering. We also piloted our first "satellite campus" in collaboration with Hofstra University in the greater New York area. The program is already growing by leaps and bounds; **2023's cohort includes 506 students from 100+ colleges and universities.**

Next year, we will significantly expand our virtual AI program to support our most diverse cohort of participants yet. To help us scale, we will develop a consortium of university partners as "instructional hubs" across the US and pilot our first-ever "train the trainer" model to help build university capacity, all with the shared goal of cultivating the next generation of leaders in AI.

Computing Program

In 2023, Break Through Tech's Computing Program at the City University of New York (CUNY), University of Illinois Chicago (UIC), University of Maryland, College Park (UMD), George Mason University (Mason), and Florida International University (FIU) saw a consolidated **35%** increase in women's participation in CS majors.

Sprinternships™, Break Through Tech's flagship experiential learning opportunity, allow companies to broaden the aperture of their early talent recruitment efforts, rethink their diversity/equity/inclusion strategies, and open a new pathway into paid internships and jobs. In 2022, we published the **Achieving Greater Gender Equity in Tech report** summarizing five years of data, including results for over 1200 Sprinterns (all students that recruiters typically overlook) and over 125 employers. The bottom line: these students were more than **ten times** as likely to land a paid summer tech internship with a Sprinternship™ on their resume than without.

63%
of Sprinterns
received an offer for a paid internship after completing the program

This year, more than **500** students completed a Sprinternship™ at **51** host companies. This was a 28% increase from 2022. More than half – 57% – were Black, Latina, or first-generation college-goers. **Nationwide, research shows that less than 30%** of undergraduates have an opportunity for a paid internship, with White men being significantly more likely than Black, Latinx, or first-generation students to have this high-impact opportunity. (Strada). It is one of the reasons we are so excited that with a Sprinternship™ on their resume, 63% of our students received an offer for a paid summer internship. More than twice the national average. And for those students who applied to their Sprinternship™ host company, **nearly 73%**received an offer! This is significant because all the data shows that paid internships boost students' confidence in their career opportunities, the value they place on their education, and post-graduation earnings.

Additionally, our National team has worked to make the Sprinternship™ program more efficient and effective and allow for greater scale. In particular, we:

- Aligned student prep workshops with industry needs both in technical and career readiness trainings.

- Created an *Employer Playbook* that acts as a planning roadmap and answers FAQ for new employers interested in hosting Sprinters.

- Enhanced employer outreach and prospecting by pitching Sprinternships™ as a national program rather than only recruiting by site/college.

- Refined our *Employer Onboarding* to give companies better insight into how Sprinternships™ can support their existing talent acquisition goals; and introduced a *Supervisor Orientation* to give hiring managers guidance on mentoring Sprinterns™.

Never doubt yourself. You are smart enough, you are strong enough, and you deserve to be where you are.

UCLA AI student Izeth Torres Reyes shares one of the key benefits of the Break Through Tech experience: increased self-confidence.

Engaging Industry and Academia
To Create New Pathways Into Tech

Break Through Tech is positioned at the intersection of industry and academia to fund, develop, and deliver innovative programs and solutions that bend the curve toward gender equity in tech.

Curriculum Innovations for AI/ML

In addition to programmatic growth, the AI program redesigned our **Machine Learning Foundations** summer course in collaboration with a Curriculum Committee of subject matter experts from industry (ASAPP, Google, Meta, Splice, and Verizon) and academia (Cornell, CUNY Hunter College, Howard, and UPenn). The redesign further aligns what our students are learning in the classroom with the real-world problem-solving they will encounter at work.

We are also excited to share that we have developed and piloted an innovative **career readiness curriculum** delivered through a **structured mentorship program** with young professional industry mentors. We prioritize helping our students feel connected to the growing movement of women in tech. Our goal is for diverse college women to become part of a supportive community.

Our mentorship program enables us to engage a wide array of alumni and industry champions with our current students, thereby creating deeper support for their early-career ambitions. Because we know that both skills and social capital matter to early career success, students have the opportunity to work closely with a professional mentor in a small group of peers and cover topics like:

- Learn about technical roles within data science, ML, and AI domains and their requirements.

- Develop job search methodologies to identify, evaluate, and apply for summer internships or full-time roles.

- Create and revise a professional portfolio, including a resume, LinkedIn profile, GitHub profile, and more.

- Prepare and practice for coding and ML interviews.

- Grow a professional network within the AI field.

- Prepare to get the most out of an internship experience.

Industry Engagement

In 2023, Break Through Tech engaged hundreds of industry partners in connecting our students to industry-relevant skill development, experiential learning, and mentoring opportunities. With the support of these partners, here are just a few of the projects our students completed:

Sprinternships™

- **American Express:** Developed a user interface for monitoring platform releases, with the ability to track the list of changes planned within a given release.

- **Elevance Health Carelon:** Analyzed and explored data for key insights into past performance and set up reporting and dashboards that will track improvements in key performance indicators of a pilot product.

AI

- **Memorial Sloan Kettering Cancer Center**: Analyzed how open-source Large Language Models (LLMs) trained on medical data can improve model performance in the medical domain, for potential patient care use cases.

- **Guidehouse**: Created data visualizations to analyze patters in humanitarian needs since the beginning of the crisis in Ukraine, and built a complementary machine learning model to forecast humanitarian needs in the region.

- **MIT-IBM Watson AI Lab:** Leveraged LLMs to build specialized, capable, accessible, and safe conversational assistants with minimal expense, as part of the Lab's ongoing research into "Principled Language Assistants."

- **Amazon:** Built a machine learning model capable of categorizing products into one of four groups – "Exact", "Substitute", "Complement", or "Irrelevant" – based on a given search query board producing higher quality search results and reducing the number of irrelevant products displayed to shoppers.

Additionally, **the AI Program partnered with Google to host a datathon in partnership with Kaggle**. AI program participants across the country competed in teams to build a movie recommendation system for YouTube.

Break Through Tech continues to cultivate national partners – companies that operate in multiple locations – and deepen our partnerships.

In particular, in 2023, we established strategic partnerships with American Express and Verizon to formalize what we now call our Pipeline Sprinternship™ program as an innovative addition to their standard tech talent recruitment strategies. American Express hosted 107 Sprinterns™ across NY, DC, Miami and the West Coast to pipeline these students into their summer internship program at regional office hub locations. This inaugural iteration of a "*Pipeline Sprinternship™ Program*" resulted in 82% receiving offers to apply for the Amex Summer Internship with 60% percent accepting offers.

Expanding the number and depth of our industry partnerships is a win-win: companies get access to a diverse talent pipeline, and our students get real-world experience that helps them enter the tech workforce. Over time, we hope that innovative programs like our Pipeline Sprinternship™ program become a standard part of how companies recruit for diverse tech talent.

My advice to other students is to dive in. Coming with an open mind and **embracing every aspect of the experience can be transformative.**

Meredith College student Wanjiru Mambo shares knowledge she's gained from her Break Through Tech experience.

Raising Our Voice
To Make Sustainable Change

We aim thought leadership at the barriers that keep diverse young women from studying and working in tech, and we talk about why it matters. We publish content and speak publicly about this problem to increase understanding within industry and higher ed of its scope, urgency, implications, and innovative solutions. Our storytelling fuels action and change. Here are a few highlights from the last year.

Founder and CEO, Dr. Judith Spitz, published two well-received articles in Forbes: It's Budget Season and Burying the Lead On the Upheaval in Tech. Alongside Break Through Tech Alum Nalini Ramdeo, Judy participated in a widely viewed *LinkedIn Live* event sponsored by Verizon called "The Pathways to Success as a #WomanInTech." This year,

Judy was the proud commencement speaker for Hofstra University's Schools of Business, Engineering & Applied Science, and Communication undergraduate ceremony. Judy was also invited to speak on Diversity in AI at several other conferences including the Hispanic Technology Executive Council and the Business-Higher Education Forum Annual Meeting. Judy and other senior Break Through Tech leaders have also presented at a number of conferences throughout the year including the Grace Hopper Conference.

Promoting last fall's report, *Achieving Greater Gender Equity in Tech: The Sprinternship™,* continues to drive web traffic and downloads. The report was also featured in or led to coverage in the *New York Times*, *Workshift*, McKinsey's *Lessons in Leadership*, and Crain's *New York Business*. In addition, the Sprinternship™ program was featured in panels at the RESPECT and Tapia Conferences, and paper submissions from FIU and UMD about Sprinternships have been accepted at SIGCSE, which will take place in spring 2024.

Here's to a year that celebrates and develops diverse college students' potential, regardless of their privilege, and accelerates even more of them into careers that can change their lives — and ours.

Connect with us on Instagram, where we continue to introduce these young people, and on LinkedIn, where we publish news and stories about how our programs support their goals.