# HCCC'S 12TH ANNUAL GIRLS IN TECHNOLOGY SYMPOSIUM

Inspiring & Supporting Young Women in STEM

# THURSDAY, MARCH 27, 2025 8:30 a.m. - 2:00 p.m.

Culinary Conference Center 161 Newkirk St., Jersey City, NJ 07306

ACTIVITIES | PANEL DISCUSSION | STUDENT DISPLAYS | PRESENTATIONS | CONTESTS | GIVEAWAYS & MORE!









# Welcome to

# Hudson County Community College's 12th Annual Girls in Technology Symposium!

#### Dear Students:

On behalf of Hudson County Community College and the School of Continuing Education and Workforce Development, I thank you for joining us for #GIT2025 - the 12th Annual Girls in Technology Symposium!

We also thank your teachers, counselors, and administrators who encourage you to pursue your passion for STEM. As the program unfolds, we encourage you to engage and ask questions during our "A Day in the Life of Women in STEM" panel and STEM activities.

We hope you leave more inspired than before!

Chastity Farrell
Assistant Vice President, Continuing Education and
Workforce Development





# **AGENDA**

8:30 a.m. to 9:00 a.m. Busses Lobby Banquet Room	Student Check-in Guest Check-in Breakfast	
9:00 a.m. to 9:10 a.m. Banquet Room, 1st Floor	Opening:	Chastity Farrell, Assistant Vice President, Continuing Education and Workforce Development, Hudson County Community College
	Welcome:	Dr. Christopher Reber, President, Hudson County Community College
	Review of the Day:	Lori Margolin, Associate Vice President of Continuing Education and Workforce Development, Hudson County Community College
9:10 a.m. to 9:15 a.m.	Opening Remarks: Essay Contest Winner:	Gissela Guerra, Jose Marti STEM Academy
9:15 a.m. to 10:15 a.m. Banquet Room, 1st Floor	Panel Discussion:	"A Day in the Life of Women in STEM" PANELISTS: Denise Dagadu, Partner Manager at Google Hilary Padget, Registered Architect, CPHD, Partner at pHdesign Ceallaigh Pender, Founder at Salvation Wellness Jade Sessions, Software Engineer at The Farmer's Dog Allison Wesley-Jones, Senior Services Engagement Manager at Veeva Systems MODERATOR: Alka Kustagi, Principal at a-Squared LLC
<b>10:15 a.m. to 1:15 p.m.</b> Banquet Room, 1st floor	Activities:	Booming Field of Data Science: Data Breakdown of the Polycystic Ovary Syndrome by The Data Science Institute at Saint Peter's University  Activities Session 1
Scott Ring Room, 2nd floor & Johnston Room, 2nd Floor	10:45 a.m. to 11:15 a.m.	Tech Builders: Discover Electrical Engineering by New Jersey Institute of Technology Helen and John C. Hartmann Department of Electrical and Computer Engineering The Science of Sound & Mind by Salvation Wellness Password Strength Challenge by HCCC Students, Girls Who Code Exploring Careers Through Virtual Reality by HCCC's ACCESS Program Student Display Contests & Voting: Technology: Past, Present and Future  Activities Session 2
	11:15 a.m. to 11:45 a.m. 11:45 a.m. to 12:15 p.m. 12:15 a.m. to 12:45 p.m. 12:45 a.m. to 1:15 p.m.	Activities Session 3 Activities Session 4 Activities Session 5 Activities Session 6
1:15 p.m. to 2:00 p.m. Banquet Room, 1st floor	Lunch Proceedings 1:30 p.m. to 1:40 p.m.	Student Display Contest Winner Announced and Photos
	1:40 p.m. to 1:50 p.m.	Presentation: Eastern Millwork Apprenticeship Program
<b>2:00 p.m.</b> Lobby	Dismissal	

## **OPENING SPEAKER ESSAY WINNER**



**Gissela Guerra** is a sophomore at Jose Marti STEM Academy in Union City and a dedicated member of the Protecting Paws club. A highly creative and expressive individual, Gissela has a deep passion for the arts, especially music. Whether she's strumming her guitar or laying down basslines, she finds joy and inspiration in every note she plays. Her love for music fuels her creativity, influencing not only her artistic style but also her outlook on life. When she's not immersed in music, Gissela enjoys exploring different forms of art and expressing herself through her work. She is always looking for new ways to grow especially in the STEM field as she plans to pursue a career in the medical field.

# "A Day in the Life of Women in STEM" MODERATOR:



Alka Kustagi Principal, a-Squared LLC

Alka Kustagi successfully launched and has managed her Architectural Design firm since 2013. She is the first person in her family to immigrate to the US, work at a few top firms in Manhattan, secure an architectural license with the AIA (currently licensed in NY&NJ), and start a business within nine years of moving to the US, which was not an easy task as a woman of color. Running a small business means Alka wears many hats. Alka develops her business by constantly networking with industry leaders, building long term relationships that go beyond everyday business, securing certifications from various professional and government agencies, and collaborating with other industry professionals. She optimizes design, drawings, and management processes to deliver cost-effective, good quality drawings/services, growing her business organically by word of mouth, good quality work and demonstrating the highest ethics in retaining clients.

## **PANELISTS**



**Denise Dagadu** Partner Manager, Google

Denise is a highly motivated and results-oriented leader with 10+ years of experience driving strategic partnerships and delivering impactful business solutions in the technology sector. As a Partner Manager at Google, she leads large-scale product integrations, empowering major technology platforms to provide native digital advertising solutions to small businesses. With a dual degree in Economics and Information Sciences & Technology from Penn State University, Denise has consistently bridged the gap between business strategy and technological innovation throughout her career. She is a passionate advocate for equitable technology initiatives and empowering underrepresented communities. Her outstanding contributions to partnership development, program management, and community engagement have been recognized with multiple awards.



Ceallaigh Lorenz
Founder, Salvation Wellness

Ceallaigh Lorenz is a dynamic entrepreneur, educator, and wellness innovator who has successfully bridged the gap between technology and holistic health. As the founder of Evolve Revolution LLC, she grew her business to a multimillion dollar building, while building partnerships with major tech companies including PayPal, Venmo, LlnkedIn and WeWork. Her second venture, Rx3 LLC, achieved remarkable 350% growth margins in its first year.

With over a decade of experience in wellness education and business development, Ceallaigh has been a frequent speaker at technology and innovation events, including NJ Tech, Propelify, and engagements at NJPAC, McKinsey, and PayPal's New York headquarters.

Currently serving as an Executive Board Member of the Alliance for Massage Therapy Educators, Ceallaigh is passionate about empowering the next generation of wellness entrepreneurs. Her work has been featured in Business Insider, Inc.com, and various publications, showcasing her unique perspective on the intersection of wellness, technology, and business growth.

## **PANELISTS**



Allison Wesley-Jones
Senior Services Engagement Manager, Veeva Systems

Allison is a senior level technology professional with experience in software sales engineering, project management, and team leadership, culminating in her current role as a Senior Engagement Manager at Veeva Systems Inc. In this capacity, she oversees the implementation of integrated commercial and medical software applications for biotechnology and global pharmaceutical manufacturers. She takes an analytical approach to motivating her customers to select and utilize services which represent a significant portion of the company's annual revenue.

Allison graduated from North Carolina State University with a bachelor's degree in electrical engineering and later earned an MBA from the University of Cincinnati. Allison is married to Darryl, and they are the proud parents of two young adults. When Allison is not working, she enjoys volunteering with Delta Sigma Theta Sorority, attending local food and music festivals, and traveling the world (Ghana, Caribbean, South Africa, Australia/Hong Kong, Montreal, Paris, London, Italy, Cuba, and Costa Rica).

Veeva Systems Inc. is the global leading supplier of cloud-based software solutions for the life sciences industry. Committed to innovation, product excellence, and customer success, Veeva is headquartered in the San Francisco Bay Area, with offices in Canada, Europe, Asia, and Latin America and currently employs more than 6500 employees worldwide.



Hilary Padget
Registered Architect, CPHD, Partner at pHdesign

Hilary Padget is an experienced Architect and Project Manager with a demonstrated history of working in the construction industry. She is skilled in Sustainable Design, Architectural Design, Visualization, Design Research, Construction Management and Historic Preservation. Hilary is a strong designer and project management professional with a focus on historic townhouse renovation and restoration.



Jade Sessions
Software Engineer, The Farmer's Dog

Jade Sessions is a software engineer based in New York. She has a degree in Computer Science from Boston University and multiple years of experience building software for external and internal customers. Jade has a passion for building products for users and is continuously learning.

## **ACTIVITIES**

# Booming Field of Data Science: Data Breakdown of the Polycystic Ovary Syndrome The Data Science Institute at Saint Peter's University

This workshop will introduce students to the fast- growing field of Data Science and the exciting opportunities it presents. The speakers will cover the essential skills for success and career growth prospects in the field of Data Science. A real-world application of data science will be showcased through an analysis of the Polycystic Ovary Syndrome (PCOS). This presentation will empower the female audience by illustrating how data visualizations can raise awareness about the female anatomy. Throughout the workshop, students will engage in an interactive quiz-based online game platform called Kahoot! - learning while earning points towards a reward.



# Exploring Careers with Virtual Reality, CEWD ACCESS Program

Students will undergo Transfr's "Transfr Trek", which is a virtual showcase of career modules fitted towards in demand industries, including: Virtual Healthcare Clinic, Aviation Maintenance and Electrical Construction/Manufacturing. Students will also test out the Roam and Road Test through a Drivers Ed simulator in City Car Driving.



THE Data Science INSTITUTE

#### **HCCC's Girls Who Code Password Strength Challenge**

Students will attempt to crack common passwords with online tools. Afterwards, they will learn about the importance of utilizing strong passwords, as well as how to formulate them using a mix of characters to meet positive cybersecurity standards.



## **ACTIVITIES**

#### The Science of Sound & Mind: An Interactive Journey into Meditation Salvation Wellness

Students join a groundbreaking session where science meets mindfulness. Watch as cutting-edge neurotechnology meets ancient wisdom in this unique demonstration combining crystal singing bowls, meditation, and real-time brainwave monitoring. Students will be selected to wear an EEG headband, allowing the participants to witness firsthand how sound and meditation influence our brain states. This activity is perfect for young women interested in neuroscience, technology, and mindfulness. This session offers a fascinating glimpse into the future of wellness technology while providing practical tools for stress management and mental clarity.



### Tech Builders: Discover Electrical Engineering New Jersey Institute of Technology Helen and John C. Hartmann Department of Electrical and Computer Engineering

Students will engage in hands-on circuit building, exploring the practical applications of electrical and computer engineering. Using electronic components, they'll construct and test projects demonstrating circuit fundamentals, renewable energy, and sustainable technology. This activity aims to inspire students to envision themselves as engineers, solving real-world challenges through circuit design.





#### Yousef Alshahed

Yousef is a Computer Science/Cybersecurity major and avid cycler currently serving as the Social Media Manager for HCCC's Cybersecurity Club.



#### Monteria "Teri" Bass

Teri is the Assistant to the Chair of Administration in the Helen and John C. Hartmann Department of Electrical and Computer Engineering at NJIT. She holds a Bachelor of Science from New Jersey City University in Business Administration with a concentration in Finance.

After spending three years in the banking industry Teri fell into education and discovered a love she did not know existed. She has a passion for helping students and giving the girls that look like her a welcoming face in a department full of men. She lives by the African Proverb, "If you educate a man, you educate an individual. But if you educate a woman, you educate a nation." She is one of the creators of the annual SHE in ECE event at NJIT, introducing middle school and high school girls to engineering every summer.

She completed her Masters in Higher Education Administration and graduate certificate in On-Campus Student Administration. She is currently pursuing her Doctorate in Higher Education at Fairleigh Dickinson University. Her research focuses on the recruitment and retention of African American women in Engineering.



#### Kavya Bhatia

Kavya has 9+ years of experience in the Information Technology industry as a Senior Consultant and is currently pursuing a Masters in Data Science from Saint Peter's University. Some of her analytics strengths are in Python, SQL, data structures, logic and computation. Kavya is focused on honing her problem-solving abilities and expanding her Data Science skillset.

Fun Fact: A conversationalist and debate enthusiast!



## **Christopher Benjamin**

With a Bachelor's in Computer Technology from NJIT and currently pursuing a Master's in Engineering Management, he serves as a Lab Engineer in the ECE Department. He provides students with technical support and hands-on learning experiences, driven by a passion for problem-solving, technology, and mentorship, to foster a supportive and efficient learning environment.



#### **Moksh Borkar**

Moksh is a Computer Science major and avid explorer currently serving as the treasurer for HCCC's Cybersecurity Club.



#### **Aneeta Channar**

Originally from Pakistan, Aneeta began her career in data science with a research fellowship at the Mayo Clinic. Witnessing the impact of data science on cancer research, she decided to pursue the graduate program at Saint Peter's University. Aneeta is enthusiastic about leveraging data analytics to improve patient outcomes and develop cutting-edge solutions for pressing healthcare challenges. Fun Fact: Loves animals and is a crazy Chai fanatic!



### **Trinity Desrosiers**

Trinity is pursuing a Bachelor of Science degree in Computer Science - Artificial Intelligence and Machine Learning. She recently transferred from Rider University to Saint Peter's University. Trinity's academic background includes studies in business principles and global issues, providing a well-rounded foundation that complements her focus on technology and innovation in Computer Science. Fun Fact: Avid book reader and workout aficionado, especially Pilates and barre!



#### Susan Fitzsimons

Director, Security Technology Services

Sue is currently a Director in Security Technology Services at EY and her team is responsible for the implementation and maintenance of several security tools designed to help protect the EY firm and its clients. In her almost 27-year career at EY, Sue has been given the opportunity to be engaged in various Information Technology projects. Ten years ago, she joined Information Security and continues to be amazed about all the technological advances and enjoys the continual learning. She has over 30 years of experience in technology, cyber and information systems. Before starting at EY, she was employed at American Express. She has held numerous roles at EY. She has managed multiple development teams supporting all the business lines including Tax, Audit and Assurance, Technical and Business Consulting. She has also managed the Americas EY Data Center, and started an EY Infrastructure Monitoring team, both teams operating 24x7x365. She has also opened supporting offices in Kerala, India and Buenos Aires, Argentina and loves managing and teaming with truly global partners. Sue finds most rewarding the personal relationships she has developed and cultivated through the years. She's very passionate about helping women and underrepresented talent succeed in Cyber and Technology as a whole. She has a Bachelor of Arts in Communications from University of Delaware in Newark, DE. She also holds her Masters from New York University's Interactive Telecommunications Program. She also has a GIAC Security Essentials (GSEC) certification.

Susan lives with her husband and has two sons (Aidan 24 years old and Grady 22 years old) in Northern New Jersey. She is an active member of the Hyacinth Foundation and contributing member to Lamp for Haiti. She is a strong advocate for Diversity Equity and Inclusion, Women in Technology and Cyber, collaboration circles, supports organizations like Women in Technology Professional network. When not at work, Sue loves relaxing with a good book on the beach. She also enjoys traveling.



#### Glenda Guerrer

Dr. Glenda Guerrero has dedicated herself to lifelong learning for almost 30 years, focusing on helping students achieve success in the fields of data science, computer science and engineering. Utilizing her deep knowledge of content appropriate for the given educational level, Dr. Guerrero employs inquiry, observation, and evaluation as the basis for assessing and improving student learning in a manner that is appropriate for their age and language needs. While her initial interest in this field was sparked by her experience as the daughter of immigrants, her passion for justice and empathy towards individuals with neurodiverse abilities have compelled her to serve a wide range of students.

As a Catholic first-generation Latina in S.T.E.M., Dr. Guerrero continues to fulfill her mission of mentoring groups that are often underrepresented in terms of race, gender, and ability. She has encouraged self-exploration and empowered innovative approaches to learning, which have helped to support the academic achievements of students who have traditionally been marginalized. Dr. Guerrero received a B.S. degree in Computer Science with a minor in Spanish from William Paterson University and an M.A. in Computing and Education from Columbia University - Teachers College. She received her Ed.D. degree from Saint Peter's University in 2020.



#### Gil Hernandez

Having graduated from NJIT with a degree in Electrical Engineering Technology, he now works within the institution's Electrical and Computer Engineering Department as a Lab Engineer, providing essential support to both undergraduate and research labs.



#### Xena Khan

Xena is a Computer Science/Cybersecurity major and budgie lover currently serving as the President for HCCC's Girls Who Code.



Esthela Leon

Esthela is a biology major and sonny angel enthusiast currently serving as the VP for HCCC's Girls Who Code.



#### **Ceallaigh Lorenz**

Ceallaigh is the Founder of Salvation Wellness and a dynamic entrepreneur, educator, and wellness innovator who has successfully bridged the gap between technology and holistic health.



#### **Nico Monzon**

Hey, my name is Nico. I am currently an apprentice working at Eastern Millwork. I work closely with CAD programs and wood technology. I'm working towards my degree in Advanced Manufacturing at HCCC. When I'm not at work or studying, I enjoy nature and film. I also enjoy architecture, engineering, and other design fields. Feel free to ask me any questions about STEM or my career.



#### Isaiah Montalvo

I'm an engineer and former apprentice at Eastern Millwork Inc. I've been living in Jersey City my whole life, and I've been with the company for little over 5 years.



#### **Phoenix Overholser**

"Hey there! I'm currently an apprentice at an advanced manufacturing architectural woodworking company, learning the ropes while crafting some seriously cool stuff. When I'm not working with wood, you'll find me training and teaching Muay Thia; because who doesn't love a good roundhouse kick? I'm also a proud family man with three younger siblings who keep life interesting. Outside of all that, I enjoy painting (I'm basically a modern-day Picasso) and cruising on my motorcycle. Life's a mix of power tools, punches, and paintbrushes, and I wouldn't have it any other way"



#### Maritza Reyes

BA, Sociology and Anthropology, Director of Center for Adult Transition, HCCC CEWD Serving the neurodiversity community for the last two years by bridging educational opportunities, employment readiness skills, and career exploration, through virtual reality.

With more than twenty-five years of experience in Workforce Development, I am passionate about giving back to the community byways of creating innovative workforce development opportunities to our underserved and unrepresented. I have had the privilege of working with the incarcerated population and Hudson County Businesses, in previous roles at HCCC, and am now committed to providing young adult with intellectual and developmental disabilities educational pathway opportunities, career awareness and readiness skills, and support for student success, keeping in alignment with HCCC vision and mission of social and economic mobility.



#### John Sasso

Associate Director, Global Endpoint & Cloud Security Technology Lead

John is a NYC metro area-based Global Endpoint & Cloud Security Technologies lead within Information Security in EY's Technology practice, specialized in the areas of IT operations, infrastructure management and people development. John has 20+ years' experience in IT operations management and in partnering with business partners to delivery on service & technology needs.

John serves as an Abilities Leader, for the New York City Metro area, managing a portfolio of community engagement events annually focused on skills-based volunteering programs in education, mentoring and career readiness. He is currently an Advisory Board member for HCCC Gateway program and an Advisory Board member for the NJ chapter of NPower.



#### **Norman Smart**

Norman Smart is the dedicated Coordinator of the Center for Adult Transition (CAT) Simulation Lab at Hudson County Community College (HCCC). With a background in software development, healthcare and currently simulation technology, Norman oversees the daily operations of the state-of-the-art simulation lab, ensuring all equipment is functioning correctly and safely. He collaborates closely with educators and students to plan and execute realistic simulation scenarios that enhance learning and skill development.

Norman's expertise in simulation technology and his commitment to education make him an invaluable asset to HCCC. His role includes training users on the simulation equipment, maintaining and troubleshooting technical issues, and continuously updating the lab with the latest advancements in simulation technology. Norman's leadership and technical skills ensure that the CAT Sim Lab remains a premier facility for career awareness and exploration.



#### Alina Stolina

Associate Director, Global Information Security, Supplier Risk Assurance

Alina is a NYC metro area-based Global Information Security professional, specializing in the third-party risk management. With 25 years in the technology sector, Alina has dedicated 17 of those to EY, building a career rooted in Business Analysis and Information Security. Her journey began as a Java software developer. Later, she transitioned into a business analyst role, where she discovered her passion for bridging the gap between technology and business.

Later, at EY, influenced by EY leadership's vision, she was drawn to Global Information Security Supplier Risk Assurance. This transition allowed her to blend her technical expertise with risk management, successfully leading IT projects and process transformations that enhanced operational efficiency and strengthened compliance frameworks.

Alina is a mentor and advocate for young professionals, committed to helping both men and women navigate their careers. She believes in holistic success, emphasizing the connection between health and performance.

Outside of work, Alina finds joy in spending time with her husband, two children, and two dogs. Her greatest fulfillment comes from making a positive impact—no matter how small—on those around her.



#### Priya Suresh

Director, Global 360 Client Security Assurance Lead

Priya is a Global 360 Client Security Assurance Lead at EY. Priya Suresh is a seasoned professional with over 22 years of experience in cyber and information technology. She has held key roles at KPMG, JPMorgan Chase, and EY, including Chief of Staff for CISO, Portfolio Manager and Technology Risk Manager. Priya has led initiatives in Security Awareness & Training, Client Security Assurance, Data Analytics, and Service Management.

Priya is passionate about delivering projects that provide business value, leading strategic initiatives, and fostering relationships for personal and professional growth. She is also committed to mentoring the next generation in Cyber and Technology.

She holds a Bachelor of Science in Electronics Engineering from Mumbai University and a Master of Science in Computer Science and Engineering from The University of Texas at Arlington. Her certifications include CISSP, CRISC, GISP, GSEC, PMP, and CSM.

Living in Northern New Jersey with her husband and two daughters, Priya is a Girl Scout advisor and a strong advocate for Women in Technology and Cyber. In her free time, she enjoys cooking, reading, watching shows, and traveling.



#### Alexandra Velez

Alex is a Latina, Hudson County native and proud HCCC alumni with over 20 years of experience in IT and cybersecurity. Thanks to early education programs in STEM available in her hometown of Union City, she was able to take her experiences in these afterschool programs in science and information technology and flourish them into a rewarding career. She currently serves as a Senior Cybersecurity Engineer at Provident Bank, while actively volunteering in the Cybersecurity community through ISC2 NJ, ISACA NJ and WiCYS (Women in Cybersecurity) chapters with the goal of giving back to the local community. Community projects include bringing cybersecurity awareness to Senior Citizens in Union City by conducting local presentations in Spanish for National Cybersecurity awareness month. She has also founded Velez Consulting Services that offers tailored solutions to small businesses focused on cybersecurity. Alex graduated from HCCC in 2022 with an Associates in Science in Computer Science (Cyber Security option). She is currently pursuing her Bachelors in Science from Western Governor's University in Cybersecurity and Information Assurance. She currently holds CompTIA A+, Network+, Security+, and ISC2 SSCP.

# **Display Contest Entries**

# "Technology: Past, Present & Future"

#### The History of Barber Polls

Bayonne High School, 10th Grade Mariam Ghobrial, Mary Yacoub, and Alexa Gonzalez

Barber Shop Polls have a rich history, vibrant present, and promising future. In the past, Barber Shops were community hubs where local residents gathered not only for grooming but also for lively discussions about politics, sports, and social issues. These establishments functioned as informal polling stations, where opinions were exchanged freely and candidly. Conversations in barber shops often provided valuable grassroots insights that could influence local decision-making and elections. Today, the tradition of Barber Shop Polls continues, albeit in a modernized form. While the physical space of the Barber Shop remains a center for community interaction, digital platforms now extend these discussions beyond the shop's walls. Social media and online forums capture similar sentiments on a larger scale, preserving the spirit of candid debate and community. Looking to the future, Barber Shop Polls are poised to blend tradition with technology. Emerging tools in data analytics and social media integration could formalize these informal polls, offering deeper insights into public opinion. By combining the authenticity of face-to-face dialogue with digital reach, barber shop poles may evolve into a respected source for community sentiment, bridging the gap between local conversation and broader political trends. Their enduring influence continues to empower many communities.

#### From Patient to Protector: The Advancements in Healthcare and Cyber Security

County Prep High School, 9th Grade Jannat Saqib and Bianca Tricta Kurokawa

With the increasing use of digital technologies in healthcare, the need for a robust cybersecurity system is more important than ever. Patient data and medical records are key documents that help healthcare providers obtain the necessary information to treat patients and maintain data for future reference. Cyberattacks on healthcare systems are becoming more frequent and severe, with over 31 million Americans negatively affected by various data breaches in 2024. In recent years, countries around the world have been impacted by COVID-19, which has further weakened the security of healthcare databases. With our research, we as students are eager to change the world of technology and healthcare, aim to explore the importance of patient privacy advancements in medical records, and the security of protecting data. Ultimately, we seek to provide an outline and solutions to strengthen the future of healthcare and cybersecurity, while also highlighting the critical role of women such as Dr. Vivian Lee and diversity that has helped in shaping the future of health technology.

#### **Evolution of Elevators**

County Prep High School, 11th Grade Sara Martinez and Jessica Ho

How have elevators evolved from simple, manually operated lifts to the IoT-enabled systems we use today? Elevators have become a vertical transportation staple that allowed for significant improvements in the construction of high-rise buildings and granted greater accessibility to individuals. We analyzed how elevators have transformed from simple, manually operated lifts used during ancient times to today's sophisticated, IoT-enabled systems, which ensure safety and optimize energy consumption. For centuries, early elevators were primarily used to move goods rather than people. The idea of an elevator was first powered manually using pulley systems with ropes and counterweights. This mechanism was considered as lifts as their main function was transporting heavy materials such as goods in bulk for mines and factories. It wasn't until the Industrial Revolution, with the introduction of steam engines, that elevators began to evolve into more practical and efficient systems for transporting people. Our project mentions Elisha Otis, an American industrialist who designed the first safety elevator in the mid-19th 19-century. Otis's invention further transformed the industry, making elevators safe for human use. As technology and advancements continue to evolve, today's elevators are integrated with IoT technology, offering enhanced safety, energy efficiency, and maintenance, further revolutionizing transportation.

# **Display Contest Entries**

"Technology: Past, Present & Future"

#### The CRISPR Revolution

County Prep High School, 10th Grade Simran Marwaha and Twisha Patel

Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) is a powerful gene-editing tool that started as a part of bacteria's immune system. Scientists first discovered it in 1987, but it wasn't until 2021 that they realized it could be used to edit DNA in a precise and affordable way. Since then, CRISPR has led to breakthroughs in medicine. In 2023, the first CRISPR-based therapy, casegevy, was approved to treat sickle cell disease, helping patients live with fewer painful symptoms. It's also being tested to restore vision in people with genetic blindness and to make cancer treatments more effective. Beyond medicine, CRISPR is changing agriculture by helping crops resist disease and survive extreme weather. Scientists are even using it to develop plants that can absorb more carbon from the air, helping fight climate change. Artificial intelligence is improving CRISPR by helping scientists predict the best ways to edit genes with fewer risks. With these advancements, CRISPR is opening up new possibilities in healthcare, farming, and the environment which will shape a future where genetic editing could solve some of the world's biggest challenges.

#### Women in the Workforce

**Explore Middle School, 7th Grade Warta Kamble** 

Technology is a part of our everyday life, even if we don't notice it. Technology can come in tools, devices, machines, and more. It can use science, engineering, math, and prior knowledge to develop a new concept or improve an old one. In the 1940s, NASA hired Black women to work as human computers. These women had to do mathematical calculations with little assistance from slow computers. Some other women worked as computer programmers, engineers, and mathematicians. They used technologies such as Monroe calculators, IBM computers, and wind tunnels. Some of these technologies were fairly new and they have certainly progressed by now. Just like the technologies, laws about equality and the treatment of women in the workforce also changed. Back in the 1940s, the skilled, hardworking women who came to work with NASA faced racism and sexism. The hidden figures were these women. With technology and time, their stories unfolded which brought light to the past, shaped the present and will affect our future.

# Powering the Future: How Wind Sources Have Transformed Over the Years

Jose Marti Stem Academy, 9th & 11th Grade Alma Gonzalez and Ashley Guzman

Wind energy utilizes the power of air to generate electricity. This has allowed global transitions from detrimental fossil fuels to more clean, renewable driven techniques, crucial in powering communities. Dating back to more than a thousand years ago in Europe, windmills were used to pump water, grind crops, and cut wood by the conversion of kinetic energy of propelling blades to produce action. By the 19th century, the first electricity generating wind turbine was developed in Cleveland, Ohio. However, they were insufficient due to inconsistent wind patterns. Currently, wind turbines are being adapted to efficiency and affordability through lightweight materials like aerodynamic blades. Offshore wind farms across oceans have also risen because of stronger, more reliable winds. Looking ahead, Artificial Intelligence will guide in predicting wind patterns, sustaining battery storage, and understanding the best areas to place newer wind systems. Some unique inventions on the rise include Floating Offshore Wind methods and Airborne Wind Energy which have converted to higher altitudes to capture more wind and expand its energy capacity. Therefore, addressing environmental, resource, and structural issues will be vital in ensuring that wind energy becomes a dominating principle responsible for the world's growing energy needs.





SCAN THE OR CODE





### **CENTER FOR ADULT TRANSITION**

# ACCESS Program



WORKFORCE DEVELOPMENT Accessible College and Continuing Education for Student Success

## PRE-COLLEGE TRANSITION PROGRAM

The HCCC CAT ACCESS Program is partially funded by "County College-Based Centers for Adult Transition Grant"



#### **ELIGIBILITY REQUIREMENTS**

- Ages 17-24
- Must be diagnosed with an intellectual or developmental disability.



#### **TUITION FEE**

- \$3,500.00 Tuition
- Includes laptop, all course materials, and supplies!



#### **PROGRAM COURSEWORK**

- Life and Coping Skills
- **Work Readiness Skills**
- Digitial Literacy
- Microscoft Word
- Microsoft Excel
- Microsoft PowerPoint



#### CAREER **PLANNING**

- 1:1 Person-Centered **Planning Sessions**
- **Career Exploration**
- **Community Linkages**
- Academic and **Workforce Pathways**

## WHY CHOOSE ACCESS?

- Budget-Friendly Tuition
- Group and One-on-One 90-Day Post-Program Academic Coaching
- Virtual Financial Education
- Customized Lesson Plans
- **Support Services**
- Community Partner **Engagement Events**
- Peer Mentor Support
- VR Career Exploration Lab
- ACCESS Alumni and Parent Advocacy Groups **COMING SOON!**



**//// Sessions Available!** Learn More!





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# Start your career in the Healthcare Industry.







Don't Put Off Your Future Any Longer - Get Started Today!

#### **Enhanced Certified Nurse Aid Program**

In this 125-hour New Jersey State Approved Certified Nurse Aide program, students will be prepared for the N.J. Department of Health and Senior Services Skills and Written Examination. The course will consist of classroom and clinical setting instruction.

#### **Credentials:**

Certified Nurse Aide's Certification (CNA) from the New Jersey Department of Health and Basic Life Support for Healthcare Providers (BLS).

### Fast Track Patient Care Technician Program

#### **Credentials:**

- OSHA & HIPAA certificate of training by the National Safety Compliance
- EKG Technician Certification by the National Health Association (NHA)
- Phlebotomy Technician Certification by the National Health Association (NHA)
- Patient Care Technician Certification by the National Health Association (NHA)
- Basic Life Support Certification for Healthcare Providers by American Heart Association

#### WIOA grant requirements (please bring documents listed below):

- Valid ID Valid Driver's License, US Passport, US Passport Card,...
- AOSOS Registration Form (Completed in office)
- Social Security Card
- Citizenship US Birth Certificate, US Naturalization Certificate,...
- Proof of Income (Past 6 months)
- Proof of family size (Children under 18, marriage certificate, etc.)
- Resume
- High School Diploma, College Degree, or Transcript
- Selective Service Registration

To learn more about our Healthcare programs, please complete our online intake form



Lilian Martinez Imartinez@hccc.edu 201-360-4233 HCCC,CEWD 168 Sip Ave., D203 Jersey City NJ 07306





To learn more about our scholarship programs, fill out our interest form below:



https://tinyurl.com/GTIInterest

For more Information:
Evani Greene
egreene@hccc.edu
862-234-0701

# GATEWAY TO INNOVATION

#### SCHOLARSHIP TRAINING PROGRAM

Gateway to Innovation is a grant-funded program that helps students start a career path in finance & technology. The program prepares students with professional certificates and wraparound career development services that can jump start a career change.

# FINANCE & TECHNOLOGY CERTIFICATES

GOOGLE IT SUPPORT SPECIALIST

#### GOOGLE DATA ANALYST\*\*

\*\*Previous industry experience or degree required for this certification

HRCI Human Resources Associate\*\*

\*\*Previous industry experience or degree required for this certification

INTUIT BOOKKEEPER

SALESFORCE OPERATIONS

META SOCIAL MEDIA MARKETING

### **PROGRAM BENEFITS**

- Certification Training Courses
- Career Readiness Assistance
- Financial Literacy Seminars, Mentorship,
   Employer Engagement, and Networking Events



# **Hudson County Community College**

Early College program offers high school students 50% savings on tuition and a jump-start on college goals.







attend school or live in Hudson County to earn up to 18 college-level credits per academic year, and to save 50% on tuition! Credits may be applied towards a college degree at HCCC, or transferred to a four-year college or university upon graduating from high school.







Early College Students in specific programs with partnering high schools can earn even more credits or a full associate degree while still enrolled in high school.

#### **ENROLL NOW!**

Talk with your high school counselor or contact HCCC directly.

Students attending one of the Hudson County Schools of Technology, email secaucuscenter@hccc.edu or call 201-360-4388.

All other students, email <u>earlycollege@hccc.edu</u> or call 201-360-5330.

For full details, go to https://www.hccc.edu/programs-courses/academic-pathways/earlycollege/index.html.

Learn all about HCCC's Early College Program at https://www.hccc.edu/programs-courses/ academic-pathways/early-college/





**Hudson is Home!** 























# **Introduction to the Entertainment Industry**

Understanding the entertainment industry

Various stages of production

Professional expectations in film and television

#### **LEARN MORE**

Register for an informational session scanning the QR Code





CONTACT US HCCCFilmAcademy@hccc.edu

RegistrationLink: https://bit.ly/40JP3H6

**HCCC** Department of Continuing Education

# SUMMER YOUTH & TEEN PROGRAMS

July 7 – August 22 Ages 9 - 15

Choose from any of our Culinary Arts programs, SAT Test Prep classes, CPR, and Photography offerings.

Both middle school and high school students experience a variety of engaging and enriching programs at Continuing Education's Summer Youth & Teen Programs.

Our unique one- and two-week, hands-on programs are offered in partnership with the College's Culinary Arts Institute. Programs emphasize self-discovery, cognitive reasoning, and cooperative thinking using a hands-on approach.

All Summer Youth Programs take place on our main campus at Journal Square.



DIGITAL PHOTOGRAPHY



CPR & FIRST AID FOR TEENS



**SAT PREP**Math Prep\Language Arts Prep



**CULINARY PROGRAM** 



# TO REGISTER:

https://tinyurl.com/SUMMERatHCCC

# **QUESTIONS?**

Contact (201) 360-4224 or Carmen Guerra at cguerra@hccc.edu



NOTES:

# Thank you to our sponsors!

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