



Technology Stars of the Future Showcase & Awards Ceremony
March 12, 2011

Presented by Bank of America and
the National Center for Women & Information Technology



About the Award | www.ncwit.org/award



The NCWIT Award for Aspirations in Computing recognizes young women at the high-school level for their computing-related achievements and interests. Awardees are selected for their demonstrated outstanding aptitude and interest in information technology/computing; solid leadership ability; good academic history; and plans for post-secondary education. Founded in 2007, the NCWIT Award for Aspirations in Computing has grown to a combined National and Affiliate program, drawing interest from thousands of young women from across the United States.

The 35 young women chosen as national winners of the 2011 NCWIT Award for Aspirations in Computing were selected from among more than 2,800 students, representing all 50 states, Puerto Rico, and overseas military bases. The winners come from broad diversity of socioeconomic and ethnic backgrounds: 34 percent are African American, Latina, or Native American/Alaska Native; 17 percent attend schools where 40 percent or more of the student body receives free or subsidized lunch.



Scholarships

The following institutions offer scholarships to recipients of the NCWIT Award for Aspirations in Computing:

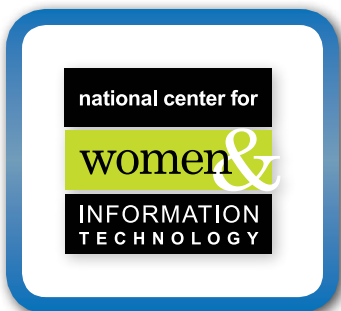
★ University of California Berkeley	★ University of Massachusetts Boston
★ University of California Santa Cruz	★ University of Massachusetts Lowell
★ University of Colorado at Boulder	★ Notre Dame
★ Colorado School of Mines	★ Purdue University
★ Harrison College	★ Rose-Hulman Institute of Technology
★ University of Houston Downtown	★ Rutgers University
★ Indiana University Bloomington	★ University of Texas at Austin
★ IUPUI: Indiana University Purdue University Indianapolis	★ Virginia Tech
★ University of Massachusetts Amherst	



About Bank of America

Bank of America is proud to have been the sponsor for the National Award for Aspirations in Computing since 2008.

Bank of America is one of the world's largest financial institutions, serving individual consumers, small- and middle-market businesses and large corporations with a full range of banking, investing, asset management and other financial and risk management products and services. The company provides unmatched convenience in the United States, serving approximately 57 million consumer and small business relationships with more than 5,800 retail banking offices and approximately 18,000 ATMs and award-winning online banking with 29 million active users. Bank of America is among the world's leading wealth management companies and is a global leader in corporate and investment banking and trading across a broad range of asset classes, serving corporations, governments, institutions and individuals around the world. Bank of America offers industry-leading support to approximately 4 million small business owners through a suite of innovative, easy-to-use online products and services. The company serves clients through operations in more than 40 countries. Bank of America Corporation stock (NYSE: BAC) is a component of the Dow Jones Industrial Average and is listed on the New York Stock Exchange.



About the National Center for Women & Information Technology (NCWIT)

NCWIT is the National Center for Women & Information Technology, a non-profit coalition that seeks to increase the participation of girls and women in IT and computing.

NCWIT is a learning community of more than 250 member corporations, academic institutions, government agencies, and non-profit organizations. Working together in Alliances, NCWIT members focus on reform throughout the entire spectrum: from K-12 through college education, and from the workforce through entrepreneurial careers. NCWIT Alliances collaborate on research and outreach projects, share ideas and effective strategies, and work towards common goals of organizational reform, diversity, and awareness. NCWIT serves as a national voice of awareness and advocacy for the increased participation of girls and women in IT and computing.

Find out more at www.ncwit.org.

Message from Bank of America



Bank of America is proud to be the sponsor for the National Center for Women & Information Technology Award for Aspirations in Computing.

On behalf of Bank of America and all of our employees worldwide, I want to congratulate you on your selection as a 2011 national winner! You should feel very proud of this accomplishment.

You were selected on the strength of your accomplishments in computing as well as your leadership ability, academic history, plans for post-secondary education and potential to make a valuable contribution to the field of information technology.

Your success demonstrates that you already understand the importance of technology in our society. Yet despite a growing demand for technology skills, women remain vastly underrepresented in this profession. For the good of our economy and competitiveness in innovation, it is essential that we encourage young women to pursue careers in technology and provide them with opportunities, mentors and role models to be successful.

Bank of America has earned national recognition as an employer of choice for professional women and people of all backgrounds. We strive to make our workplace an inclusive meritocracy that rewards employees for working comfortably with colleagues who bring different perspectives to the workplace. We believe this variety creates a competitive advantage for our business. It helps us to develop more innovative products and services for our diverse customer base. And it helps us to maintain a more interesting and satisfying workplace environment for all our employees.

We are pleased to have this opportunity to recognize such a promising group of young women. I encourage each of you to continue your education in computing and to pursue a career in technology. The field of Information Technology will be enriched by your presence!

Congratulations and best wishes.

Regards,

A handwritten signature in black ink, appearing to read "Amy Brady".

Amy Brady, Chief Information Officer – Enterprise Control Functions Technology and Operations and Global Program Sponsor for Women in Technology and Operations, Bank of America

Message from NCWIT



On behalf of the NCWIT community and board of directors, I want to congratulate each of the 2011 winners of the National Award for Aspirations in Computing. You are an inspiring group of young women and I am looking forward to seeing the innovations you will create.

NCWIT is dedicated to increasing women's meaningful participation in computing and IT. We believe that inspiring more women to choose careers in computing and IT is a compelling issue of innovation, competitiveness, and workforce sustainability. In a global economy, gender diversity means a larger and more competitive workforce; in a world dependent on innovation, it means the ability to design technology that is as broad and creative as the people it serves.

Your unique talents and perspectives are desperately needed. Almost every major challenge facing our world is turning to computing for a solution, from conquering disease to eliminating hunger, from improving education to protecting the environment. In addition, computing jobs are plentiful and they pay well.

NCWIT is here to support you in your journey, wherever it may take you. Please don't hesitate to contact us. The NCWIT network of over 250 organizations is here to help with scholarships, mentoring, internships, and advice.

Congratulations and best wishes.

Sincerely,

A handwritten signature in black ink that reads "Lucinda Sanders". The signature is written in a cursive, flowing style.

Lucinda Sanders, CEO & Co-founder, National Center for Women & Information Technology (NCWIT)

Aspirations Award Leadership



KATE RUSH, VICE PRESIDENT, BUSINESS SUPPORT MANAGER AND GLOBAL WOMEN IN TECHNOLOGY & OPERATIONS PROGRAM LEAD AT BANK OF AMERICA

Kate is passionate about building community, support and recognition for women in technology both within Bank of America and across the Information Technology profession. At Bank of America Kate supports the global Women in Technology & Operations (WIT&O) program, which has 13 chapters and about 2000 members. The group is focused on attracting, developing and retaining women in Technology and Operations at Bank of America through sponsorship, development and outreach. Kate partners with NCWIT on programs like the Award for

Aspirations in Computing, on behalf of Bank of America and WIT&O.

Kate also provides business management support for the Global Integrated Business & Technology Services (GIB&TS) organization that is part of Bank of America's Global Technology & Operations division. GIB&TS is responsible for delivering a broad portfolio of enterprise wide technology services that includes IT program delivery, release management, transition support and divestitures.

Kate joined Bank of America after graduating from Davidson College in 2006. In her previous assignment she led transition and large change projects for Bank of America.



RUTHE FARMER, DIRECTOR OF STRATEGIC INITIATIVES

Ruthe Farmer has focused her efforts on increasing girls' participation in technology and engineering since 2001. She has extensive experience in K-12 informal STEM education for girls and has implemented a number of national initiatives including GirlFest, Intel Design & Discovery, FIRST Lego League for Girl Scouts, and Firestone On the Road.

As Director of Strategic Initiatives at NCWIT, she provides strategic planning and direction, fund development, and cultivation of new partnerships for NCWIT. She describes the NCWIT Award for Aspirations in Computing as her "baby" and is dedicated to growing the program to serve the entire US and recognize 1000 young women annually.

Ruthe brings a wealth of experience in informal education, national collaboration, and fund development. She holds an MBA in Social Entrepreneurship & Marketing from the University of Oxford Said Business School and is passionate about integrating innovative business strategies into social change efforts.

Aspirations Award Alumni



KITT VANDERWATER, NORTH CENTRAL COLLEGE

Kitt Vanderwater is a college junior at North Central College. After winning the Award for Aspirations in Computing three years ago, Kitt has been busy at work. She was a Microsoft Scholar in 2009, one of fifty students accepted to attend the inaugural Google FUSE event and has been a Teacher's Assistant since her Sophomore year of college. Last summer, Kitt worked as a software engineering intern at Google in Seattle, Washington. During her internship she worked with a partner to create an internal server to graphically display results for the Google Uploader using C++ and two internal Google tools. This summer she will be working for Google again as a Program Manager in sunny San Francisco. In her spare time, Kitt enjoys extreme trampolining, baking too much, and taking marathon naps. Kitt spent the first half of her school year in Spain, and is lamenting the cold weather in her hometown of Chicago.



RANIKA KEJRIWAL, CARNEGIE MELLON UNIVERSITY

Ranika is currently a sophomore studying Electrical and Computer Engineering at Carnegie Mellon University. Ranika's interest in this field began when she first took AP Computer Science in high school. At CMU, she has taken a variety of classes in both EE and CE and hopes to continue to explore both fields in the next two years. This summer she will be interning at Qualcomm in San Diego where she will be working with their CDMA technology group to develop software that runs in phones with Qualcomm ASICs. Outside of the classroom, Ranika is very involved in the organization Women in Electrical and Computer Engineering (WinECE) and serves as the Mentoring Chair. In her free time, Ranika enjoys dancing.

2011 Winners



AMANDA BERCKEFELDT | Paola, Kansas

Class of 2011, Paola High School/Kansas Academy of Mathematics and Science

At 16, Amanda moved 250 miles from home to attend KAMS (Kansas Academy for Math & Science), a two-year early college-entry program for high school juniors and seniors, and she will be a part of KAMS' first graduating class in 2011. Amanda's passion for KAMS has inspired her to be an advocate for continued funding for the academy, and she visits her state capitol to encourage legislation in support of this.

She's proficient in Photoshop, InDesign, and web design including HTML. Amanda was a member of her high schools robotics team, contributing more so as an engineer than a programmer. She says, "I liked to think of how the robot would be most efficient for the game, instead of how we could actually make it do that."

In addition to her challenging academic schedule, Amanda works on a college level research project involving researching web and graphic design technologies for the Paola Tourism Association. She receives college credit for her work at KAMS and plans to study computer science and information technology when she enters college in the fall.



ARUSHI RAGHUVANSHI | Beaverton, Oregon

Class of 2011, Jesuit High School

Arushi became a member of a local Lego Robotics team at age nine, and has immersed herself in computer science since. She has since learned programs such as C, C++, and Python. She cites her interests in Quantum Circuits, Humanoid Robots, Genetic Algorithms and Evolution, Group Theory, Fuzzy Logic, Image Processing and Machine Learning, and has published and presented papers in prestigious international technical conferences on her research in these topics. She's participated in science fairs since third grade, her most recent entry using image processing techniques and machine learning to diagnose melanoma cancer.

Arushi's impressive resume landed her an internship with Intel, providing her with even more opportunities to present her work to the computer science community. With Intel, she has worked on parallel programming and multi-threading using the Intel Cilk technology for C/C++.

In 2008, Arushi presented the research paper, "Using Fuzzy Quantum Logic to learn facial gestures of a Schrödinger Cat puppet for robot theatre" at the 17th International Workshop on Post-Binary ULSI Systems in Dallas, Texas. She was then invited to discuss an extension of the paper at the 2010 IEEE World Congress on Computational Intelligence in Barcelona, Spain.

2011 Winners

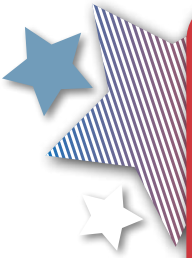


AYESHA BOSE | San Diego, California
Class of 2011, Francis Parker High School

Ayesha's interest in science first began as a young girl, when she would watch meteor showers all night in the desert with her father and dream of living on the International Space Station.

Though she has long since moved beyond her dreams of being an astronaut, her interest has evolved specifically to computer science. Ayesha has applied her advanced skills at the Jisan Research Institute over the last three years on projects involving Linux, Pascal, and binary and ternary trees in C. This past summer, she attended the Research Science Institute at MIT, where she worked in the Computer Science and Artificial Intelligence Laboratory on an underwater robot. She worked on developing an object recognition system for the robot to behave more autonomously and was recently awarded semi-finalist in the Siemens competition for her work, "A Combinatorial Method of Object Recognition for the AMOUR VI Underwater Robot." She also serves as president for her school's Science Olympiad and FIRST Robotics teams.

Ayesha says that creating a robot that can learn and grow is something she'd most like to pursue in future work and she plans to study Electrical Engineering and Computer Science in college.



BETH HADLEY | Northville, Michigan
Class of 2011, Northville High School

As a community leader in robotics, Beth founded and continues to direct a middle school Lego robotics program and competition. She organized four summer robotics camps, earning over \$5,000 for her high school's FIRST Robotics team. In four years, over 300 students, 30 high school student mentors, and 30 adult coaches have benefited from her programs. For her outreach work, she earned recognition as an international FIRST Dean's List winner, Prudential Spirit of Community Finalist, and Girl Scout Gold Award recipient.

As a seven-year participant in FIRST Robotics, Beth's primary interests include programming and artificial intelligence. She has extensive experience developing robot code using LabVIEW, Java, and C++.

During the summer of 2010, Beth had the opportunity to intern at the NASA Glenn Research Center in Cleveland, Ohio. Along with a small team of interns and mentors, she helped develop an education outreach miniature Mars rover, which can be viewed online at dlrover.grc.nasa.gov.

Beth plans to study computer science at the Massachusetts Institute of Technology, where she hopes to investigate artificial intelligence and robotics.

2011 Winners



CAROLINE ARONOFF | Shaker Heights, Ohio
Class of 2011, Hathaway Brown School

Caroline's main interest in the world of computer science is programming, specifically in the area of robotics. She enjoys the highly logical, step-by-step process of programming that she's found to be an invaluable skill in nearly everything she does.

Caroline's proudest accomplishment in computing and technology is a project that took place over the course of two summers at Case Western Reserve University. She recently completed her work there with her partner — a fellow high school student — as well as some grad students. Her first summer in the program was spent creating a cyber-enabled wheelchair named ALEN (Autonomous Linux Enabled Navigator). ALEN is a semi-autonomous voice activated robotic wheelchair that can navigate its way around a house, given the floor plan. Her contribution included helping to program the voice recognition and the beginning stages of path planning.

Caroline plans to study both computer science and psychology or philosophy in college. Her main goal is to combine theories of humanoid robotics and human thought to develop a career in computer science and programming.



CHELSEA RISINGER | Tremont, Illinois
Class of 2012, Tremont High School

Chelsea first joined her high school's robotics team as a designer, but quickly found aptitude and interest as a programmer instead. Robotics and programming in LabVIEW are now two of her passions.

Chelsea joined the FIRST Robotics Roboteers team in high school and quickly recognized the future need for programmers within that group. In response, she decided to challenge herself by learning C++ programming code. Since there weren't any programming classes for Chelsea to attend, she worked with her school's technology coordinator and applied for a special computer station in her school, requesting professional software needed to learn C++.

Additionally, Chelsea has challenged herself by expanding her knowledge of C++ and by learning LabVIEW on her own through online courses. She was the first on her robotics team to experiment with and utilize LabVIEW.

In addition to her many extracurricular activities, Chelsea finds time to work with younger students in the Lego Leaguer's program in her school district. Chelsea plans to attend college to study either biomedical engineering or medicine.

2011 Winners



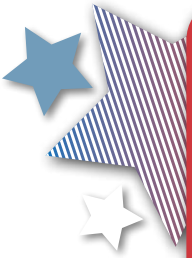
DANIELLE CHAPA | Helotes, Texas
Class of 2011, Sandra Day O’Conner High School

Danielle discovered programming in a computer science course offered in her high school, and she states that these classes have taught her to “think in a way that can be categorized as ‘outside of the box’.”

Danielle attended the First Bytes Computer Science Program last summer at the University of Texas at Austin, giving her the opportunity to meet influential women in Computer Science from various companies. These introductions helped to reinforce the idea that she could one day be working in the technology field.

Danielle is proud to hold a spot on her school’s Code Wars team with only one other girl and competes in a programming competition each year. She has made it her mission to encourage other young women to try computing and convinced some of her classmates to take computer science instead of office applications courses.

She holds the position of webmaster for the National Honor Society at her high school, and is currently working on building a new website using HTML and CSS. At the time she applied for the Award, Danielle was one of only two girls enrolled in her high school computer science classes.



DARIA JORDAN | Lawrenceville, Georgia
Class of 2011, Gwinnett School of Mathematics, Science, and Technology

As a junior, Daria started her school’s first all-female robotics team — Robo Chic. In addition to robotics, she’s worked with databases (e.g. SQL server, visual studio, etc.), Microsoft Office programs, multimedia programs (e.g. Photoshop, Premier Elements, Final Cut, etc.), and others. During her junior year, she interned at the Information Management Division of Gwinnett County, enabling her to study and learn about the architecture of databases using SQL server and visual studio.

Her passion extends beyond robotics and databases into biomedical engineering, which led her to an internship with Dr. Andrew B. Williams and the SpelBots at Spelman College in Atlanta, Georgia. Her work there includes programming an exercising humanoid robot as an intervention method for the childhood obesity epidemic. She credits Dr. Williams as an influential mentor and example in her education and research, and is proud of her ability to work with college level robots, humanoid robots specifically, and software such as Choreographer.

Throughout high school Daria has been the captain of the debate team, president of the Women in Science and Engineering club, and a Gwinnett County leadership representative.

Daria plans to attend Spelman College and become an integral part of the SpelBots robotics program.

2011 Winners



ELENA NADOLINSKI | Fairfax, Virginia
Class of 2011, W.T. Woodson High School

Elena considers robotics club a way of life. She enjoys the correlation between programming and hardware, as well as the room for creativity and teamwork in the club. Elena cites her AP Computer Science class as inspiration for exploring technology and programming, and she is one of 4 girls in that 30-student class.

As club president, she overcame the challenge of losing graduating seniors and running a much smaller team, by recruiting new members and training them prior to the start of the season. Her hard work paid off and led the team to 3rd place out of 52 regional competitors and on to the international competition. Elena published a paper for the Global Conference on Educational Robotics (GCER) based on her experience programming a Roomba in low-byte, high-byte number sequence.

Elena is also an entrepreneur. She sells jewelry made with computer parts at www.LeanTheBean.com. She strips old computers down to the last resistor and incorporates the parts with sterling silver to create jewelry. Elena plans to continue working on robotics in college while she majors in electrical engineering and artificial intelligence.



GRACE GEE | Port Lavaca, Texas
Class of 2011, Calhoun High School

The summer after freshman year Grace attended the Canada/USA Math Summer Camp as its youngest participant that year.

She considers programming more than a class, but a hobby as well. Grace has extended her knowledge of programming languages beyond Java to Wolfram Mathematica, Matlab, and Python.

She recently interned in the Lawrence Berkeley National Laboratory where she was exposed to nanotech phase imaging research. There, she helped develop a prototype of a microscope that would be used in the future in the Advanced Light Source. Her research earned her the prestigious award of National Intel Science Talent Search (STS) Semifinalist.

In school, she has won a number of accolades for her work in computer science including receiving a 5 on the AP Computer Science test and Best Student of the Year.

Grace is also a Flute Section Leader in the marching band. This year, she is team captain of her school math team that has won two University Interscholastic League (UIL) state champions in a row. She is also helping set up her school's Mu Alpha Theta club and is her Robotics Club's main programmer. Grace plans to study computer science after high school.

2011 Winners



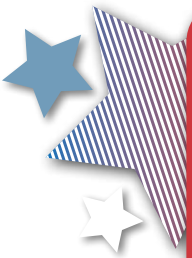
HANNAH WEIDMAN | Lafayette, Colorado
Class of 2011, Centaurus High School

Hannah's passion is biomedical engineering. She loves the interaction between modern technology, and biology — specifically, in human anatomy and physiology — chemistry and physics. She is glad she found a field that incorporates so many things she loves to learn about and do.

Some of her past projects include simulating the repair of a torsion “femur” break by repairing broken turkey bones, constructing a prosthetic leg and hand, and creating a new type of heart valve. She also enjoys creating websites and graphic design. Other fields she is interested in are software design, civil and architectural engineering, robotics, and textile manufacturing.

Hannah has spent significant time this year working on her IB major design project; the development of an athletic shoe that can be used for multiple sports, fit an active life style and would save money.

Over the past few summers, Hannah volunteered at Learning Adventure Center, a computer skills-based camp, emphasizing modern technology, for children ages 2-7. Hannah is an active member of Student Council, National Honor Society, Warrior Engineers Reaching Change (WERC) and four varsity sports. After high school, she aspires to major in biomedical engineering or a neurobiology related field, coach basketball and design shoes for Nike someday.



HIRANYA MIR | Miami Lakes, Florida
Class of 2012, Miami Lakes Educational Center

Hiranya is interested in a variety of technology related projects, including robotics, networking, and programming. She is currently creating a community service project that involves educating middle school students about “sexting” and how technology is a tool that should not be abused. Hiranya is involved in Women of Tomorrow, where she encourages young girls to explore IT and become professionals.

She is Vice President of SECME, and head of the Robotic Hand team working on creating and programming a bionic hand.

Hiranya has been a leader and a mentor to students who have sought assistance on technology projects since middle school. Her interest in computers began when she learned Microsoft Office programs such as Word, and PowerPoint, but she discovered she wanted to know how computers work and was soon able to take a computer apart and put it back together.

Because of her dedication and accomplishments, Hiranya received the I.T. Essentials Award, and became CompTIA A+ Certified. Her enthusiasm for learning computer systems runs deep, and she is currently enrolled in Cisco's NetRiders and NetRiders Security competitions. Hiranya plans to attend Georgia Tech to study computer engineering.

2011 Winners



IVANNA GUTIERREZ | Charlotte, North Carolina
Class of 2011, Phillip O Berry Academy of Technology

Ivanna says that it's been her dream since elementary school to become a Computer Engineer. She has taken two years of Visual Basic.net, XHTML/JavaScript in an e-Commerce Class, as well as Java in both AP Computer Science and a class dedicated to the Java language itself.

Beyond her schoolwork, she has done volunteer work at the Magnet School of America Convention and at the International Studies High School at Garinger. She also tutors elementary school children in her community.

She's held a summer internship with her school fixing over 200 computers and configuring the school's computer network. She's most proud of a Visual Basic. Net project for Honors Computer Programming II, in which she wrote a program to teach cultural information about Puerto Rico.

Ivanna is an IT Delegate and Student Ambassador, and helps teachers and students alike with technical questions as well as more broad information about the school itself. Ivanna is also talented in Debate. She placed Octafinalist in the 2010 Novice Public Forum Debate at the Laird Lewis Invitational Tournament.

She plans to attend UNC-Charlotte and major in computer science, and hopes to further her knowledge in creating applications for Windows Phones and games for the Xbox.



JULIA HOSSU | Dallas, Texas
Class of 2011, Science and Engineering Magnet High School

Julia says math has been a favorite subject because of patterns, structure, and the beauty of being able to understand and solve something that isn't necessarily visible in the every day world. Developing an interest in computer science was only natural, and robotics is the perfect blend of her knowledge and skills. Julia is also interested in biochemistry and engineering, and again finds that robotics helps combine all of her passions.

She has participated in First Bytes at the University of Texas at Austin, and RoboCamp at the University of North Texas. Additionally, she participates in several computer science competitions throughout the year including UIL (University Interscholastic League) meets and robotics competitions such as RoPro and FIRST Robotics.

Julia also volunteers at the Museum of Nature and Science in Dallas, working on public programs such as chemistry demonstrations and explaining exhibits, as well as acting as an assistant teacher for elementary school camps. She recently became a member of the Teen Advisory Board for a new branch of the museum, helping out with the development of new exhibits and spreading information about the museum to the public in order to get other students more excited about science and math.

2011 Winners



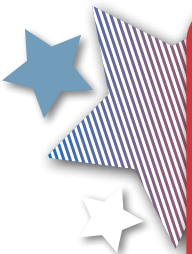
KATHERINE BRENNAN SERCOMBE | Mendota Heights, Minnesota
Class of 2011, Convent of the Visitation School

Katherine has been programming for two years, starting as a sophomore when she joined the Robettes — her school’s FIRST Robotics team. She says she enjoys programming because she is able to see tangible results of her work.

She’s learned Java, C++, C, as well as some LabView, HTML, and SQL and aspires to learn more HTML and create a website from scratch. Katherine states that her dream career would be to combine her two loves — biology and computer science — into one job.

She is a leader in her school, and has been the programming sub-team captain for robotics since sophomore year. She’s also been class treasurer and the Student Liaison to the Technical Committee during both her junior and senior years. Katherine is one of the first girls in her class to participate in The Online School for Girls, where she is enrolled in an AP statistics class.

She’s volunteers with her local library, and has recruited friends to do the same. She plans to study biological and biomedical sciences, as well as computer programming in order to further her interest in genetics and cancer research.



KATHRYN BARTEL | Bronx, New York
Class of 2012, Horace Mann School

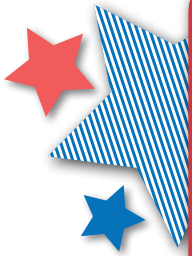
Kathryn entered RoboCup’s “Rescue Challenge,” which is a simulation of a toxic-waste-strewn area requiring a fully autonomous robot to navigate through an obstacle course. Her team won First Place in the regional competition, qualifying them for the international competition in Singapore.

She’s currently working to incorporate autonomous robots into her school’s annual Dance Concert by exploring the sensors a robot could use to interact with dancers. Her interests extend to graphic design and web design. She is an editor and graphic designer for her school’s science publication, “Spectrum,” and has designed a blog for the magazine and works on the layout in Adobe InDesign.

She’s taken classes in C++, Java, web design, Logic Circuits, and Robotics, and is currently taking AP Computer Science. In the future she hopes to work on projects related to bioengineering, or robots similar to the Mars rovers.

She encourages other girls in her classes to be more active in technology and states that she believes this is her duty as a woman in technology, “plus, being outspoken is much more fun.”

2011 Winners



MALLORY A. BANKS | Charleston, South Carolina
Class of 2012, Porter Gaud School

Mallory is amazed by the varied applications for computers — from being able to identify where the constellation Cancer will be, its capability to tell which news stories are developing at any given moment, and perhaps most wondrously watching her mom create a tipping program for the Droid phone using a tutorial for parents at the Annual Computer Symposium. Wanting to understand just how computers are able to do this, she is most interested in computer programming and the logic and intelligence upon which it is built.

She is one of only three girls on the Accelerated Computer Track in her grade. She has also worked in the ophthalmology lab at the Medical University of South Carolina as an intern working to find the cause and cure for Age Related Macular Degeneration.

Mallory participates in over 15 school clubs including: National Honor Society, the Porter Gaud Vestry, The Literary Journal and Magazine, Quiz Bowl, and the Porter Gaud Debate Team. She's also on the Summer Reading Committee, a tutor to Algebra I students, a founding member of the Sci-Fi Fantasy Club, and participates in the annual school musical.

Mallory hopes to major in astrophysics, cosmology or particle physics, while also pursuing a degree in English and minor in Computer Science.



MARINA NOGUEIRA | Monterey, California
Class of 2011, York School

Marina interned at the Naval Postgraduate School in Monterey where she helped design, construct, and program the prototype for an autonomous robotic target project, working with Parallax products, BASIC stamp, and Java programming. She's teaching herself Objective C in order to make iPhone apps, and has created a couple of basic apps already.

She has experience with Adobe Photoshop, creating Flash programs, and designing layouts with Illustrator. She has independently worked with a logic trainer to learn the elements of digital logic and simple circuit construction with logic chips.

Marina started a robotics club her junior year. As president, she works to provide all students with hands-on technology learning experiences, and introduce basic programming, engineering, and electronic concepts. Her team built 8 robots for the school's Fall Fair, and designed a user-friendly interface for people with no programming experience to be able to play.

Marina, whose name means "from the ocean," loves the water and volunteers at the Monterey Bay Aquarium. She was girl's varsity swim team captain junior year, and will be captain again as a senior.

In college, Marina plans to combine her passion for robotics and her interest in the medical field.

2011 Winners



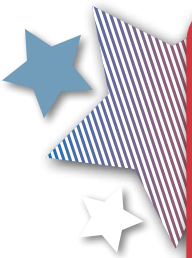
NICOLE EDELSTEIN | Altamonte Springs, Florida
Class of 2011, Lake Brantley High School

Nicole has been programming computers since her family first owned a PC. While others were chatting on instant messenger, she was coding. She wants to incorporate programming with her accounting skills to create what she considers the “job of a lifetime.”

She is interested in developing new ways of tracing the origin and spread of concepts, and to make it simpler to determine the impact of important published papers or articles.

Nicole worked on a project to combine weather information with geographic data systems to create visual displays in the event of a natural disaster. As a Florida resident, she cites hurricanes as a real concern for community. Nicole’s GIS mapping program uses Google satellite images to track weather that is relevant to a user’s area and other phenomena that may affect the weather, such as wildfires.

Nicole has been the president, coach, or chairperson of several school clubs, and is a varsity cheerleader, but identifies herself first and foremost as a programmer. She is planning to attend college in Florida and wants to study business and computer forensics.



NORA CASTREJON | Chicago, Illinois
Class of 2012, Benito Juarez High School

Nora has a passion for preserving our environment, an aptitude for problem solving, and a love for science. She would like to develop hardware and software for geological imaging equipment, and her goals include using GIS to analyze patterns and trends on the effects of urban runoff on water quality.

She interned for the Nature Museum T.E.E.N.S program. She also volunteered at GO! Team, a program designed to engage South Chicago Latina girls in computers.

She is the founder of STARS (Students Towards Achievement Responsibility and Succeeding), a mentoring program pairing upperclassmen with underclassmen to help freshmen navigate their first year. She used her passion for Information Technology in this program, when she created a website to help students outline their future goals and create a connected network of mentors.

Nora is also a member of the Chicago Youth City Council. In this position, she gained experience in multimedia and web design, iMovie, Photoshop, and desktop publishing software. She served on the Leadership and Technology Committee, and helped the council members install Java and C++. Nora is an Illinois Virtual School Scholar and hopes to study information technology in college.

2011 Winners



OLIVIA WILES | Princeton, New Jersey
Class of 2011, Stuart Country Day School

Olivia is interested in computer science because she believes that computing can help make a difference for society. Her interest in computer science began with an introductory programming course freshman year of high school. This class inspired her to take the AP Computer Science test (on which she scored a 5), and enroll in courses in computer science at Princeton University.

There is no official computer club in her small school, but Olivia helps to spread interest and enthusiasm for the subject by sharing her programs with classmates, and has been able to recruit other students into computer science courses.

She helped to build a program for use by teachers in their math classes. The program simulates randomly generated math flashcards and helps students practice and master math skills. She is the head of the Mu Alpha Theta Math Club at her school, and helps encourage kids to get involved with and excited about math through the use of games that make math fun.

She is graduating a year early and plans to attend college in pursuit of a degree in computer science.



PRISCILLA RODRIGUEZ | Victorville, California
Class of 2011, Silverado High School

Lately Priscilla finds herself most interested in networking and web applications, which began when she encountered problems with servers on various sites that failed or became unresponsive due to a high volume of users.

She's taken several technology courses including Digital Electronics, Computer Information Systems, NASA INSPIRE '09-'10, PC Repair and Tech, etc. She has worked on several projects that involve circuits; such as an LED circuit board based on The Scarlet Letter, and has also attended a summer camp by Boeing where she was introduced to space computing programs.

Priscilla is involved with the National Junior Tennis League and Varsity Tennis since her freshmen year. She has been a tutor for several years, and has taken the role of editor in yearbook. As president of her school's STEM club, she has worked with the boe-bot, vex robot, and has assembled various circuits to produce projects including a working alarm and printer jam detector.

She is ranked 2nd in her class of 842 students and holds a 4.62 cumulative GPA. Priscilla wishes to encourage girls to pursue careers in technological-based fields and plans to study computer science at the University of Southern California.

2011 Winners



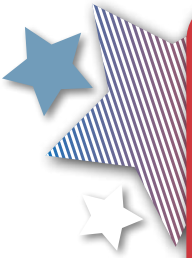
RACHEL HOLLADAY | Slidell, Louisiana
Class of 2013, Northshore High School

Rachel says there's nothing she'd rather be doing than writing and debugging HTML or LabVIEW code. She's interested in C++ and Autodesk as well. She is the only girl on the robotics' control team, and handles most of the electrical wiring and a significant part of the programming.

She's applying for the SEAP program at the Stennis Space Center, and wants to develop software to aid the mentally and physically challenged. She volunteers with Special Olympics and is inspired by how computing can help people.

She is the founding president of the American Mathematics Competition club and has tripled their membership over the course of one year. This success sparked the creation of Mu Alpha Theta at her school, and she is an active member of that club as well.

Rachel has been a science camp counselor, a varsity high school swimmer, a tutor, the historian for her school robotics team and the assistant secretary for the beta club. She created the beta club's first website and runs the robotics team's website. Other activities include the Creative Writing Club, Quiz Bowl, student government and Spanish Honor Society. Rachel plans to study computer science and earn a Ph.D.



REBECCA KEKELISHVILI | Staten Island, New York
Class of 2011, Staten Island Technical High School

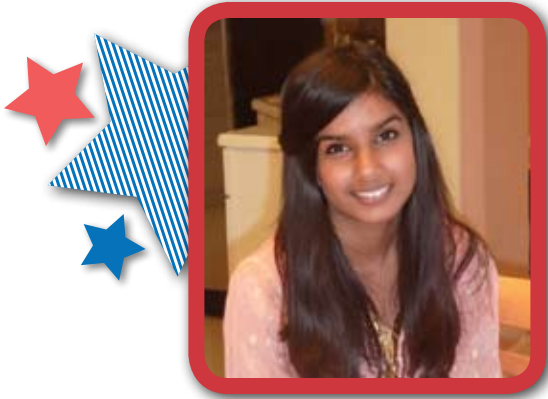
Rebecca is a member of the MIT-Lemelson Invent team, and contributed to the development of a wheelchair design that included heating and cooling components, a bacteria-free, porous fabric, a pressure-relief aspect, wireless communication, and a holonomic base. Rebecca also helped develop the drive train on the wheelchair so that it could slide in all of the cardinal directions without making wide turns.

She was also involved in LAB Squad — a group of students who assist the school in setting up regents and AP laboratories for sciences.

Rebecca joined her school's FIRST Robotics team with no prior programming knowledge or experience, but quickly learned how to program code for the robot. In four years, she became proficient in C++ programming, networking for robot-to-computer communication, CAD software, and electronics. Through the years of being a member of the robotics team, she has developed a passion for engineering.

Rebecca wishes to attend a top-ranked university and is interested in projects related to artificial intelligence.

2011 Winners



REBIA KHAN | Phoenix, Arizona

Class of 2012, Xavier College Preparatory High School

Rebia is most proud of her accomplishments in computing and technology that have helped other people. As the Chair of the Arizona Governor's Youth Commission – Committee on Youth Homelessness, she is working on a website for youth and case managers that aggregates data about shelters and resources in her state.

She is involved in the ASU Engineering Projects in Community Service and developed a solar power system for a girls' school in Bangladesh. She recognized the school's need for a sustainable system, and plans for solar panels that will collect more energy than is needed, enabling the school to store and sell the extra power.

Rebia is the first high school student to enroll in the ASU Engineering Projects in Community Service (EPICS) program. She is now an officer for ASU's EPICS Maroon Club, a community service club that branched off from the main group.

She is a lab assistant at Barrow's Neurological Institute, is a student ambassador at her school, and the youngest member of the American Muslim Women's Association of Arizona. She plans to study bioengineering in college, and continue on to medical school.



ROYA EDALATPOUR | El Paso, Texas

Class of 2012, Harmony Science Academy

Roya is an intern with the CR2G Research Group and CS department at the University of Texas at El Paso. Her work includes building and programming a robot that can solve the Rubik's Cube, and she blogs about her progress at www.cr2g.constraintsolving.com/updates.

She is passionate about robotics, aerospace engineering, and programming. She has taken all the technology classes offered at her school including Introduction to Engineering Design, Digital Graphics/Animation, AP Computer Science, Digital Electronics, and is a member of her school's University Interscholastic League (UIL) Computer Science Team.

Through robotics Roya has developed leadership skills, teamwork experience, and proficiency in programming languages such as JAVA and graphical development environments such as LabVIEW. She is experienced in HTML, Adobe, Autodesk Inventor 3D CAD program, National Instrument's Multisim software, and digital animation.

She plans to study robotics engineering, programming, and aerospace engineering, and hopes to attend the University of Texas at Austin or MIT. Her goal is to someday work for NASA and design robots that can operate in space and advance the knowledge and boundaries of mankind. Roya is a member of Student Council and is a member of the swimming and cross-country teams.

2011 Winners

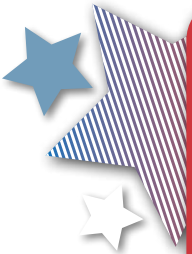


SAMANTHA MCGUINN | Las Cruces, New Mexico
Class of 2012, Las Cruces High School

Samantha has a variety of computer and non computer related interests. Her interest in computers and technology began when she was very small, and she has since accomplished a number of exciting computing achievements in robotics and programming.

Over the summer of 2010 Samantha participated in a computer science camp called Young Women in Computing. During this camp she built and programmed her own robot, designed several games and animations, and programmed a microchip and its components to execute a sequence of sounds and lights. She plans to pursue a degree in computer programming after graduation in 2012, and hopes to one day work at Google.

Samantha also has other interests outside of computer science, including creative writing, reading, hunting and acting. She has performed in several school plays at her high school and plans on performing in theater throughout college. Samantha also enjoys working with children and caring for animals.



SAMANTHA SWARTZ | Sheffield, Massachusetts
Class of 2012, Mt. Everett Regional High School

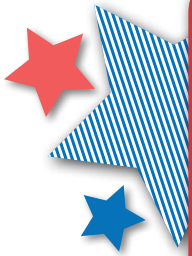
Samantha is interested in robotics and programming and is currently enrolled in her 4th Virtual High School programming course. She's studied Visual Basic, Java, HTML, C++, and Advanced Web Design. Her first solo project was the development of a program that would mimic a login menu, which she completed in two weeks.

She's worked with FIRST Lego League for 5 years, as a participant for three and as a mentor for two, and has learned and worked extensively with Robolab, Mindstorms, and RobotC. She helped found her school's FIRST Tech Challenge team.

Samantha is skilled with Adobe Illustrator, Photoshop, and Quark Express, though she says the engineering and programming work she does is her favorite. She works in her school's technology department re-imaging computer labs, running network cables, and installing printers. She is currently teaching herself how to repair iPhones, iPads, and iPods.

Samantha is involved with the Flying Cloud Institute, a non-profit organization, which promotes programs for kids integrating math, science, and the arts. She's attended the summer program for years and became a counselor last summer. She's also assisted the Girls Science Club for 4th/5th grade girls and will be leading the club this year.

2011 Winners



SARAH HUBER | Bethesda, Maryland
Class of 2011, Holton-Arms School

Sarah is interested in robotics, engineering, and computer programming, though her interests extend to a much broader range of computing-related topics. She built a computer from scratch, and maintains a wireless network, printers and various computers for her family.

She interned at Georgetown University this past summer in the neuroscience lab, where she programmed and debugged tests before testing herself (as the first and only subject to prove their hypothesis wrong).

She's worked with robots for over seven years through her school's robotics club, as well as in her own personal time. Sarah's been an active member of the robotics club since she joined in 7th grade and has been president for the past three years. She helped lead her robotics team to winning two awards in the regional BotBall competition

Sarah is also involved in her community as a contributor to their literary magazine, and is now part of the magazine's leadership board. She's active in sports and has been her soccer team captain for two years and basketball team captain for one year. Sarah plans to study engineering, robotics and computer science in college and hopes to design a new operating system.



SERENA BOOTH | Memphis, Tennessee
Class of 2011, White Station High School

Serena's primary interests lie in discrete programming. She enjoys working with artificial intelligence, and while she's applied that knowledge to robotics, she's most interested in its application for game creation. Samantha is creating a program that extends artificial intelligence to a game of tic-tac-toe, across five instead of three squares. She's prepared initial code for the program plans to develop it in the future.

Serena built her own desktop computer from raw parts, enjoying the ability to tailor it to her style and needs. She works on building bicycles and cars, and is known in her community as the "IT girl," who is frequently tasked with fixing computers and networks for friends and neighbors. When she discovered computers in her school library labeled "not working," she set up a lab and restored all twelve back to functioning.

Serena is taking three college-level computer science courses: AP Computer Science, Dual Enrollment Advanced Programming II, and Dual Enrollment Multimedia II. Serena plans a double major in math and computer science. After college, she wants to work for a software company and do her own freelance computer work.



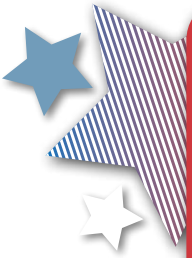
TANYA PETACH | Boulder, Colorado
Class of 2011, Fairview High School

Tanya is interested in using Python, Visual Basic, and C to create 3D visualizations of data. Her work has focused on using GIS to visualize environmental datasets, writing code in Blender to build models of technical systems, and interpreting satellite image data to describe the surface of the Earth with accuracy.

Her favorite application of computing so far has been analyzing satellite data including Earth-based observations from the DigitalGlobe satellite QuickBird and space-based observations from the NASA satellite telescopes Spitzer and GALEX. She's worked with the NASA Jet Propulsion Laboratory to analyze data from space telescopes, and the results of this project may allow a better understanding of the function of black holes in the centers of galaxies.

Tanya builds 3D models of solid objects using the open-source 3D graphics application, Blender, and has found this application useful in her creation of short documentary-style films. Tanya is the team leader for her school's Emergency Response Team, captain of the Nordic ski team, and vice president of the National Honor Society. She volunteers with the Rocky Mountain Riding Therapy program, providing equine-based therapy for people with disabilities.

Tanya plans to study computer software engineering and database management.



TAYLOR GRIFFIN | Albuquerque, New Mexico
Class of 2011, Highland High School

Taylor is an engineering intern at Sandia National Laboratories working on balancing the product-process networks. Specifically her work validates the use of a detailed linear programming technique that minimizes the differences between the desired and obtainable levels of chemical plant production.

She works with N-ABLE™, an agent-based discrete-event simulation package, which models each individual chemical firm in a supply chain. As an analyst, she uses this system to construct supply chain input files, and has developed a series of tests to work with the N-ABLE™ client.

Taylor is the president of the Black Student Union, has initiated a mentorship program pairing freshmen and sophomores with upperclassmen, and helps collect food and clothes for local neighborhoods and clothing bank programs. She organizes and hosts free movie and karaoke nights to help make her school more inclusive of low-income students. She is dedicated to "excellence that destroys mediocrity," and is the first African-American student body president and valedictorian at her high school.

Taylor says her mother inspired her to study computer science. She plans to major in computer science with a minor in finance.

2011 Winners



TESS RINEARSON | Seattle, Washington
Class of 2011, Lakeside School

Tess blends her love of languages and computer science in studying computational linguistics. She is interested in Natural Language Processing (NLP), a facet of computer science that applies computational techniques to tasks involving human language. This field appeals strongly to her because of her cross-disciplinary studies, love of Latin and Arabic, and knowledge of computer programming and mathematics.

She's studied iPhone development, and has designed and implemented an Android phone app. She's also developed a feature for Intersect's website built with Ruby, a language she taught herself. When her school's web development class was cut, Tess sought and completed a year-long independent study with Dr. Lauren Bricker focusing on JavaScript and also studying AJAX and PHP.

Tess is captain of the Lakeside Science Olympiad Team and parliamentarian of the Washington-British Columbia Junior Classical League. She coaches the middle school Science Olympiad team, co-founded the Seattle South African Scholarship Fund at age 14, and helps organize networking events for teenagers involved in non-profit work. Tess is currently organizing Ignite U21, a spin-off of Ignite Seattle specifically for young people.

Tess will be attending the University of Pennsylvania to major in computer science. She hopes to eventually pursue computational linguistics.



VICTORIA GUNNING | Boise, Idaho
Class of 2011, Centennial High School

Victoria is interested the design of autonomous robots, and specifically the use of A.I. for robotic vision, human/robot interaction, and route planning. She was inspired by meeting Caleb Chung, the inventor of the Furby, and hopes to develop robots that can interact with their environment easily, yet become more than a toy.

As a third-grader, Victoria wrote a program in C to solve Sudoku puzzles given to her by her teachers for extra credit. Within a week of writing the initial program, she bought a book to learn C++ and began studying the differences between GNU C++ and Microsoft Visual Studio C++.

Her interests include many fields, but began in digital art. She's learned GIMP, Photoshop, and Blender. Her interests have since shifted to game design and she's started learning Python, Alice, C and C++.

Victoria was selected to attend the NASA Idaho Science and Aerospace Scholars Camp and contributed to a project studying survival on Mars. She plans to attend college and major in computer engineering. She also wishes to pursue graduate degrees through a doctorate.



VIVIAN L. STEPP | Atlanta, Georgia
Class of 2011, Douglass High School

During the summer of 2008, Vivian participated in an internship with the Boys and Girls Club teaching students to use computers. In 2010, Vivian interned at the Hartsfield-Jackson Airport Development Program. Her role in the Document Control Department was to scan and catalogue the airport's documents and architectural plans using an electronic filing system. She's used Oc, Contract Manager, and Adobe Reader, and credits this experience to helping her broaden her perspective on technology.

Vivian is captain of her all-girls robotics team, and received the Top Engineering Student in Sophomore Class award. She's the lead trainer and contact person between her robotics coach and teammates, and has logged over 200 hours of volunteer service with younger students.

She's consistently remained in the top 1-2% of her class since 9th grade, is a class officer, and is on the Student Government Board. She's also been the co-captain of her school's undefeated grade level debate team. Because of her outstanding academic efforts, she will be the Valedictorian this year.

Vivian plans to attend Georgia Institute of Technology and major in computer science. She wishes to use her degree to help other women break into careers in science and technology.

Notes
