Colorado Affiliate Award Celebration

Saturday, March 5, 2011

National Center for Women & Information Technology
www.ncwit.org | 303.735.6671 | info@ncwit.org

The NCWIT Award for Aspirations in Computing is sponsored by Bank of America, an NCWIT Investment Partner.
About the Award

The NCWIT Award for Aspirations in Computing honors young women at the high-school level for their computing-related achievements and interests. Awardees are selected for their computing and IT aptitude, leadership ability, academic history, and plans for post-secondary education. The NCWIT Award for Aspirations in Computing offers both a national and local "affiliate" competitions to generate support and visibility for women's participation in communities nationwide.
2010-2011 Colorado Affiliate Organizers

Kenneth M. Anderson
Associate Professor and Associate Chair
Department of Computer Science
University of Colorado, Boulder

Cyndi Rader
Senior Lecturer
Mathematical and Computer Sciences
Colorado School of Mines

Mary Ann Roe
Co-Director
Colorado Coalition for Gender and IT

Julie Gacnik
Director of Marketing and Recruitment
School of Engineering and Computer Science
University of Denver
2010-2011 Colorado Affiliate Award Winners

The Colorado Affiliate of the NCWIT Aspirations in Computing Award is proud to present the 26 Affiliate Award Winners for 2010-2011.

Jennifer Anderson       Alyssa Hamlet
Kelsea Anderson         Kristen Kagiyama
Taylor Andrews         Hannah Klamerus
Madison Bennett        Elizabeth Mahon
Nicole Blake           Monica Mishra*
Sara Boatman           Mahek Modi
Shivani Chauhan        Kristen Nelson
Erinn Cash             Melodi Oliver
Danica Cox             Tanya Petach`
Molly Echave           Tanya Schulz
Nicole Fry             Hannah Thomas
Sabrina Garcia         Jannine Vela`
Ellyn Green            Hannah Weidman`

* National Award Winner;  + National Runner Up

National Center for Women & Information Technology
www.ncwit.org | info@ncwit.org | 303.735.6671
Jennifer is the epitome of a well-rounded student. She was the primary CAD designer for her high school FIRST robotics competition, and that team placed in the top 35 teams. She won a first place in a national competition, using SketchUp to design a room for disabled individuals. In addition, she is the Vice President of the Art Club, a member of the Spanish club, a Color Guard alumni, and a candidate for an International Baccalaureate diploma. Jennifer also fences competitively and helped organize a fundraiser for the Autism Society of Boulder County. Finally, Jennifer is the Youth Chair for the East Boulder Relay for Life. Not surprisingly, Jennifer is considering several possible college majors including structural engineering, teaching, and writing.
Kelsea Anderson
Pagosa Springs High School
Class of 2011
Pagosa Springs, CO

Kelsea Anderson is a bit of a pioneer being the first female student at Pagosa Springs High School to take a computer programming class and the first female student to complete all of the computer-related classes that Pagosa Springs High School has to offer. She hopes that this accomplishment encourages other intelligent and creative female students will follow in her footsteps and learn about computing. She credits her interest in technology to her energetic and innovative computer science teacher, Mr. Morehouse, who offered encouragement and advice and enabled her to discover her passion and talent for computing and programming. Her greatest computing accomplishment to date was the creation of a video game that taught her the basics of graphics and animation as well as the extremely important skill of working on a team. She is developing an interest robotics, because of the positive changes that field can make in people’s lives. Through robotics, she envisions designing the next generation of space technologies, bio-mechanics or even fuel-efficient cars. She loves the mechanics and programming techniques that goes on behind the scenes of robotics and she feels that robotics offers her the most options to help people and our future society. After she graduates, she intends to go to college and major in computer science and engineering.
Taylor Andrews got interested in computing in the 8th grade when she took a class that taught her about 3D graphic design using a program called Alice. The fun she had with that program inspired her to learn about programming (Taylor can code in multiple languages, such as Java and C++) and that, in turn, led her to join her school's robotics club where she helps to build robots that compete in the FIRST Robotics Competition. Taylor's greatest technological accomplishment to date is the programming of the autonomous code on her robotics team's 2010 FRC robot. Taylor's code (written in LabVIEW) enabled her team's robot to move forward and kick a soccer ball into the goal, all without a human controlling the robot directly! Taylor has discovered a real talent for computer science and has already assumed the role of helping other students with computing programming and computing-related problems. She is willing to research an algorithm or feature in depth so she can explain it better to her friends with the side benefit of gaining a deeper understanding for herself. Taylor plans to attend college, majoring in computer science. She wants to learn more about the design and implementation of new programming languages because of their ability to help you solve complex problems. She feels that computing and technology have big impacts on people's lives and she wants to acquire computing skills to help improve their lives and our society in the future.
Madison Bennett  
Thomas Jefferson High School  
Class of 2011  
Denver, CO

Madison generously uses her computer skills for the benefit of her fellow classmates. She edits the school yearbook and is President of the photo club. Although she is graduating this year and has many responsibilities, she still took the time to create full externally facing websites for the drama club and the yearbook. She also uses her design skills on yearbook spreads. She has been accepted to the University of Northern Colorado, where she is excited to study Early Education and minor in a design field, where she can continue to use her computer skills.
Nicole Blake  
Thomas Jefferson High School  
Class of 2011  
Denver, CO

Nicole likes to design things, and hence she is interested in graphic and web design. One of her favorite accomplishments was creating a website for a local nonprofit organization from scratch. As a junior, Nicole teamed up with a classmate to compete in the Skills USA program to design a website within eight hours. They placed second in Colorado. Today Nicole assists and mentors the students of the SkillsUSA club in web and graphic design. Nicole was fortunate to create websites for several groups at TJ high school including student council, girl's golf, the class of 2011, and the volleyball team. In addition, she is the module director in her yearbook class. Nicole has been active in student government since elementary school. During her junior year at TJ, she was the class president. Now in her senior year, Nicole is the student body president. In addition to earning a letter in academics, she has also earned letters in girl's softball and girl's golf.
During the past two years, Sara has incorporated technology into her education on a constant basis. She will graduate from high school this year, after having completed her last two years of schooling online. When it comes to technology, Sara is most interested in computer programming, working with databases, and multimedia design—she has also recently mastered photo editing and basic cartooning. After high school, her plans include joining the US Air Force and attending college. In addition to putting her technical skills to work on a regular basis, Sara serves as a mentor and tutor to others. These activities include taking on the vice presidency of the Junior Catholic Daughters of America, and leading the Youth Activities of VFW post 3917.
Erinn Cash does not believe in wasting time: As a junior in high school, she already can claim to be an artist, web designer, actress, author and journalist! She is also an officer of one of the top-twelve high-school vocal music groups in the state. Erinn got interested in technology due to its progressive nature and after learning how the internet works she's been studying how to utilize it and the technologies that it enables. Her greatest technical accomplishment has been the completion of her thesis on the evolution of technology, and a published essay concerning the sociological nature of the internet. As a technologist she's fascinated by how the internet connects billions of people and allows them to share information. As an artist and designer, what most fascinates her is how that information is expressed, delivered, portrayed and interpreted by those who view it. Erinn currently plans to attend college at Rocky Mountain College of Art & Design and complete her Master's in Visual Communications Design, so she can use it to take part in the reform of modern interface design.
Shivani Chauhan
Rock Canyon High School
Class of 2014
Highlands Ranch, CO

Shivani Chauhan is passionate about technology and the environment. She sees the study of robotics as a way for her to channel her creativity and technical knowledge to better the world, and potentially in medicine as well. Her maturity has helped her to be conscious of the environment and she understands that although she is passionate about robotics and technology that it is important to keep the environment in mind while being innovative. Shivani also understands what it takes to be a good leader and to respect her peers when working in groups, such as her family, the Future Business Leaders of America, the National Junior Honor Society, and Destination Imagination.
Danica Cox
Swink Jr.-Sr. High School
Class of 2011
Swink, CO

Danica became interested in computing as a way to keep up with our ever-changing world. Since making computing a part of her life, she has had the opportunity to develop interests including working with photoshop, online gaming and web design; Danica's web design skills earned her a first-place award in a district competition in website development. After high school, she plans to attend the University of Colorado at Colorado Springs to begin her academic career in history. Danica strives to serve as a role model to younger kids, and holds leadership positions with the Operation Smile and Swink Youth in Community Service organizations. She is also a member of Future Business Leaders of America, and involved in many clubs including drama club, chess club, recycling club and the school band.
Molly Echave
Grand Junction High School
Class of 2011
Grand Junction, CO

Molly loves the hardware side of computer science. She is interested in robotics and electronics, and she has learned the necessary technology behind networks (such as protocols and logical models). Molly knows, however, that it’s important to have interpersonal skills as well as technical skills, and she’s worked very hard to be a role model and mentor to technically inclined students at her high school. Molly intends to study computer science, but she hopes to eventual be a teacher.
Nicole’s interest in technology began at home, with the encouragement of her mother. Since then, she has created a blog documenting activities with her FFA chapter. In addition to being an active member of FFA, Nicole has been involved with the Girl Scouts of America for the past ten years. She plans to attend college to study horticulture and eventually open her own flower shop. Additional future plans include using technology in innovative ways to help farmers with harvesting, planting and additional agricultural tasks. Nicole’s accomplishments include acting as a leader of her local Girl Scout Service Unit, where she earned the bronze and silver awards; she also serves as a leader of her FFA chapter.
Sabrina Garcia
Antonito High School
Class of 2011
Antonito, CO

Sabrina's interest in Computer Science started with her participation in Future Business Leaders of America (FBLA). She is also interested in conserving the environment for future generations. Her greatest CS accomplishment has been designing a website with two teammates for her school's FBLA club. Sabrina also created spreadsheets in her role as class secretary/treasurer to monitor the balance of her class’s personal accounts and to help plan fund raising activities. She is a member of the National Honor Society, FBLA, Student Council, the Cross Country team, Volleyball team, Cheer squad, Basketball team, and the Track & Field team. She is also an active volunteer in her community. After high school, Sabrina plans to attend college to study environmental science and to earn a degree in environmental engineering.
Ellyn Green
Heritage High School
Class of 2011
Littleton, CO

Ellyn's interest in computer science is quite diverse, and she has yet to find an insurmountable challenge. Since sixth grade she's participated in the TSA (Technology Student Association), entering such competitions as Imaging Technology and Animatronics. Ellyn also belongs to a team that qualified for the international rounds of F1 in Schools, a competition where students design, build, and race miniature, CO2-powered, Formula One cars. She has done exceedingly well in these competitions earning 15 state titles and 5 national rankings! On top of all this, Ellyn teaches and supports other students in the technology lab at her high school. She will be enrolling in the Leeds School of Business at CU in the Fall and intends to major in marketing and use that as a launching pad into the technology side of business.
Alyssa Hamlet  
Chaparral High School  
Class of 2011  
Parker, CO

Alyssa credits Pixar's Finding Nemo as one of her inspirations in pursuing an interest in technology. She is most interested in animation and graphic design; she is an artist on paper as well as on the computer. Her scientific animations received first place awards in the 2009 and 2010 Technology Student Association annual conference in the scientific visualization category. The first visualization was in Flash, called “Earth vs. Global Warming”; the second was “Fireworks” created in Maya. She is the Vice President of her school's TSA chapter. Independent of her work with TSA, she has also helped produce a film for a local soldier. Alyssa plans to study Fine Arts with a concentration in Animation at the University of Colorado, Denver. Her ultimate goal is to be a character animator for Pixar Animation Studios.
Kristen Kagiyama
Green Mountain High School
Class of 2012
Lakewood, CO

Kristen is an accomplished graphic and video artist. Her expertise in Adobe Premiere Elements, Photoshop, Movie Maker and the suite of Microsoft Office software has allowed her to create a broad array of creative work. One of her pieces received runner up in the Jeffco Art Awards and is now on permanent display in the main entrance of the Belmar Library in Lakewood CO. When she completes her high school career, Kristen plans on becoming a web designer, or working on a job that involves graphics and digital media. A few of the projects she would like to study at college are 3D animation, video production and advertising. Kristen is an active member of her school's B.I.O.N.I.C. Team, the Student Senate and she is an Outdoor Lab Student Leader for Hutchinson Elementary School as well as Molholm Elementary School. Kristen is also an accomplished musician, playing flute in her high school marching band and other venues such as the musical being produced by her high school this year.
Hannah took her first programming class as a freshman because it was the only course that fit in her schedule. To her surprise, she loved it and has proved to have quite the talent for it, even winning a recognition of achievement from the technology department that year. She has sailed through many of the technology classes her school offers, and has plans to take the rest. Recently she acted as a teacher’s assistant for the school’s Programming 2 class, and she took an Oracle class and became certified in Oracle 9i SQL. Hannah knows several programming languages and wants to tackle web programming and design next. She has assisted local elementary school teams in LEGO robotics competitions, and hopes to continue doing so until she moves on to her college work in either applied computer science or database design.
Elizabeth Mahon
Poudre High School
Class of 2011
Fort Collins, CO

Elizabeth’s many technological achievements are showcased by her role as captain and head programmer for the FIRST Robotics Competition Team 159: Alpine Robotics. She has been the head programmer on two robots and assisted on a third; and she has worked on implementing challenging features such as autonomous programs, traction control, and mecanum drives. One of her duties as team captain is to mentor new members on the team. Prior to FRC, she was on the FIRST Lego League team, and has since mentored other FLL teams with Girl Scouts and schools in her city. She has also learned basic website coding that she has used in local service projects. She is an active and accomplished Girl Scout, earning Silver and Gold awards for service projects such as organizing a public forum informing people about ballot measures. She is hoping to study software engineering in college, with the aspiration of applying this to modeling water systems and water resource management.
Monica Mishra
Peak to Peak Charter School
Class of 2013
Lafayette, CO

Monica became seriously interested in computer science upon learning about the lack of women in the IT industry. She has incorporated computer science into her life with the goal of acting as a leader to girls and young women. After she completes her college education, additional goals include using technology to provide access to healthcare for children living in poverty, and joining an international aid organization such as Doctors without Borders or the Red Cross. Monica identifies as both a scientist and a humanitarian, and recognizes the importance of having a well-rounded education that includes classes in mathematics, social science and world languages. She is currently taking AP computer science, which involves learning Java, and focuses on object oriented programming. Her computer science skills have led her to design personal and professional web pages, and create a user interactive video game.
Mahek Modi
Rock Canyon High School
Class of 2014
Highlands Ranch, CO

Mahek is most interested in computer programs such as Adobe Suite CS4, Windows Movie Maker and Photoshop. She is currently taking a Computer Science class and is learning to program in Java, Alice and HTML. Though still a novice, Mahek has worked and experimented with various programs including Microsoft Office and Adobe Illustrator, which she uses for both school work and play. She is very proud of her digital scrapbooks that she creates by combining Microsoft PowerPoint and other tools. Mahek's greatest technical accomplishment to date has been a security system using lasers. In a few years, she sees herself attending a top-ranked college and majoring in Computer Science, Medicine or Biotechnology. Mahek speaks Hindi, Gujarati, Spanish and English, and celebrates many different holidays, from Christmas to Diwali. She enjoys helping others and believes that helping others makes her a better person.
Kristen Nelson  
Overland High School  
Class of 2012  
Aurora, CO

Kristen's interests lie in creative graphic design, computer programming, and aerospace engineering. She is actively involved in local theater, photography and enjoys the creative side of computing along with an interest in being the person her friends and family can call on when they have problems with their technology. She enjoys solving computational problems and is always happy to assist friends with computer questions. She has aspirations to study aeronautical engineering at college after she graduates and says her main goal is to build, along with the help of others, new types of rockets that will expand the capabilities of astronauts while keeping them safe from the dangers of space. In the summer, Kristen has volunteered with Recreational Services of Aurora, assisting with creating a range of graphic art from logos to posters.
Melodi Oliver  
Skyline High School  
Class of 2011  
Longmont, CO

Melodi’s interests in computing started in her early childhood as she was growing up trying to explain to her father how things worked. Though she dreamed about being a magician and a roller coaster engineer, she now believes that becoming a programmer is the coolest idea she had so far. Melodi enjoys learning about the ways computers work and finds programming both rewarding and challenging. She has already learned to program in Alice and Java. Melodi is also proficient in Microsoft Word, PowerPoint, and Excel, and is currently learning to use Adobe Photoshop. Her greatest technical accomplishment to date has been a virtual Rubik’s cube that she created in Alice. Melodi has been accepted to Utah State University where she will pursue a career in Computer Science. She hopes to engage in creating interesting user interfaces and writing more complex programs. Over the past few years, Melodi has also been an active youth leader in various activities in both her high school and church.
Tanya Petach
Fairview High School
Class of 2011
Boulder, CO

Tanya's greatest passion is in data visualization. Tanya used remote sensing to analyze satellite images to compare a region in New Zealand before and after an earthquake and see how the earthquake affected liquefaction. At her school she participates on a project team working with NASA that used space telescope images to compare the UV light emitted from the black hole at the center of an Active Galactic Nucleus (AGN) with the IR light emitted from the surrounding dust. Tanya and the NASA team are also developing educational modules to present to other students and schools to show how NASA space telescope data can be analyzed. She has also used GIS to overlay salinity data for Colorado River tributaries to map the influx of salt into the river. Tanya plans to attend college to study computer science and engineering. Tanya is vice-president of the National Honor Society at her high school. She is a tutor in the Student Achievement Center where she tutors her peers. Tanya is also a volunteer for Rocky Mountain Riding Therapy where she works closely with people who have mental or physical disabilities.
Tanya Schulz
Skyline High School
Class of 2012
Longmont, CO

Tanya is interested in sustainable energy and biomedical engineering as it pertains to increasing the capabilities and quality of life of people with disabilities. She has built a prosthetic hand with a team of other students, designed websites, and created games using GameMaker6. As a member of the National Honor Society, she does community service projects and donates blood. She is ranked first in her class, and plays on the varsity soccer team. One of Tanya's proudest accomplishments is building a device out of basic materials to help a special needs elementary school student drink out of a water fountain without assistance.
Hannah Thomas  
Central High School  
Class of 2011  
Grand Junction, CO

Hannah's inspiration for computer science came from Walt Disney Imaginations Engineers. The philosophy that you can achieve your dreams if you believe and never stop trying convinced her that if she works at it, she can become an Imagineer and design rides and attractions for the Disney Parks. She’s off to a great start – she taught herself CSS and HTML in middle school. More recently, she designed, developed, and programmed a computer game from the ground up for her programming class. Hannah's game creates virtual creatures, using user input to select from more than 50 variables. In addition to her computer science successes, Hannah volunteers locally and has won several awards (including the University of Colorado’s Outstanding Junior of the Year Award) in recognition of her accomplishments.
Jannine's love of mathematics was sparked by her eighth grade teacher and fostered by many other teachers along the way. Eventually this interest in math and also science led her to engineering, something she says goes hand-in-hand with computer science. Jannine is aiming at aerospace engineering and hopes to someday work for a facility that focuses on space and aviation. Specifically, she wants to be involved with future space explorations, Orion projects and prospective Mars missions. She has worked on numerous projects and activities that involve computers, including robotics programming, working with the MESA electric car competition and learning Java programming through her AP Computer Science source. As one of only a handful of girls in that AP Computer Science course, Jannine has begun to see herself as a leader and a future role model, hoping to influence other females to pursue higher end courses in computing and related fields.
Hannah intends to pursue biomedical engineering, which allows her to merge her love for physics, biology, and chemistry with her desire to help people live their lives to the fullest extent. She is most interested in tissue engineering, prosthetics and other medical projects. Hannah views biomedical engineering as an interaction between modern technology and human anatomy and physiology. She has used CAD systems and other design software in biomedical design projects, including an ongoing effort to develop a multipurpose athletic shoe that can be used for any type of exercise or sport. Using the inspiration of this shoe project, Hannah and her friends have organized a community wide shoe drive. Hannah has also volunteered at the Learning Adventure Center, teaching computer skills to children. Though biomedical engineering is her focus, she also enjoys web design and would like to explore software architecture, architecture, civil engineering, robotics, and textile manufacturing.
2010-2011 NCWIT Aspirations in Computing Educator Award

The NCWIT Aspirations in Computing Educator Award is presented to educators who have demonstrated a commitment to encouraging young women's aspirations in computing. Awardees are selected from among those that have endorsed applicants for the 2010-11 NCWIT Award for Aspirations in Computing. Through a generous contribution from Google, each Educator Award recipient will receive up to $1000 of reimbursement for travel and registration expenses for professional development in computing or information technology. The Colorado recipients of this award, Jerry Esparza and Denise Gardiner, are two of just twenty educators nationwide selected for this honor. Great teachers are one of the most important factors in inspiring young people to engage with technology in meaningful ways.
Jerry Esparza
Thomas Jefferson High School
Denver, CO

Jerry Esparza is currently a Denver Public Schools Teacher. This is his 5th year teaching at Thomas Jefferson High School in the Center for Communication Technology program. His main teaching focus is teaching 3D Design and Web Design. He is also a teacher adviser for SkillsUSA, a student run organization that allows students to take on leadership responsibilities and compete in their technology skills nationally. In 2007 Jerry served as a panelist for the NCWIT and NSF Summit workshop on K-12 IT Education.

From 2003-2008 he worked with the summer technology camp, Digital Currents, a collaboration effort between the ATLAS program at CU and the Denver Public Schools.

Prior to joining the Center For Communication Technology, formerly the Computer Magnet, Jerry taught computer technology in various K-8 and middle schools within DPS. He also served as the School Technology Resource specialist, assisting teachers with technology integration within the curriculum. His other teaching experience include implementing the Online Individual Career Academic Portfolio across the school district. And, spent eight years as a middle school science teacher using technology as a tool for learning.

He graduated with a Bachelor of Science degree in Science Education from the University of Iowa and obtaining his Masters from UCD in Instructional Technology. His most recent educational accomplishments, was receiving his Colorado Principal's License from Denver University. He also is serving as a member of the Collaboration School Committee and the Teacher Leadership Committee for Thomas Jefferson High School.
Denise Gardiner
Pine Creek High School
Colorado Springs, CO

Denise Gardiner's unexpected interest in technology started as an undergraduate when she found she enjoyed the problem solving process and logical reasoning required in her Computer Science classes. After earning her B.A. at Vanderbilt University she worked as a computer programmer and systems analyst. Fulfilling a lifelong dream, she then became a Peace Corps volunteer in the Federated States of Micronesia where she taught English as a Second Language. Upon returning to the United States she completed a graduate program at Florida State University to become a math and technology teacher. In 2000 – 2001 she piloted a year-long Oracle Academy database class in which students learn database design and SQL programming. She also served as an adjunct instructor for Oracle Corp. for five years, training and mentoring new Oracle Academy teachers across the United States. In 2007 she co-founded Pine Creek High School's annual technology luncheon in which prospective female technology students learn about technology courses, degrees, and careers from women in the IT industry as well as from girls currently studying technology at Pine Creek.