



Career and Technical Education

CTE DIRECTIONS

Career and Technical Education (CTE) News and Information

December 2022

Career and Technical Education provides all students access to high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

U.S. Presidential Scholars in CTE Nominees

Congratulations to Aaron Wang, Benjamin Lamoreaux, Catherine Bao, Leah Crossley, and Xinying Bi who have been nominated as 2023 U.S. Presidential Scholars in Career and Technical Education. All five nominees have been nominated for this high honor because of their academic accomplishments, their technical competence, the certifications they have earned, and for their ingenuity and creativity to solve problems. The 2023 U.S. Presidential Scholars semifinalists will be announced in April and the finalists will be announced in May.

Aaron Wang

Aaron Wang is a student at Skyline High School in Granite School District. He has been passionate about computer programming since he entered high school. Aaron has taken advantage of the many opportunities available to learn and understand the vast field of computer science. As a research assistant at the University of Utah, he has been able to further his knowledge and understanding of computer science as he created models for a wide range of tasks.



“Through CTE, I learned the value of combining theoretical, abstract knowledge with hands-on engineering tasks. I’ve loved computer programming since I entered high school, and I was especially interested in artificial intelligence and machine learning. As a research assistant for two labs at the University of Utah, I’ve been able to utilize computer science to create machine learning models for a range of tasks, such as decoding movements from electromyographic signals. At the same time, I’ve worked with hardware devices and developed a wristband to stream data over Bluetooth and WiFi. In the future, I hope to work with a combination of hardware and software and research technologies to assist the elderly and people with disabilities,” said Aaron.

Benjamin Lamoreaux

Benjamin Lamoreaux is a student at Pleasant Grove High School in Alpine School District. Since he was a child, he has dreamed of being an engineer. He was fascinated with how things worked. As Benjamin continued his education, he has taken advantage of the many opportunities to take a variety of classes to obtain technical skills and learn about other careers. After graduating from high school, Benjamin has chosen to study computer science in college.

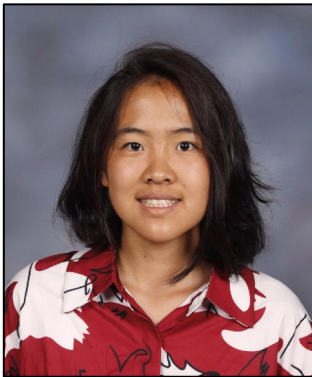
“I took classes like metals and digital media, and I couldn’t get enough. I finally had the opportunity to learn real-life applications for the creativity I had been harboring for so long! I was intrigued by everything, so I explored everything.

“When I look toward the future, and my career, it is obvious that CTE will be the defining factor. Whether I end up working in game development with programmers, artists, and musicians, AI-human integration with neuroscientists, machine learning experts and hardware professionals, or some exotic new field with a group of experts that don’t yet exist, every technical skill I’ve learned along the way will only enable me further, as I work with other similarly passionate people to have the greatest impact on society,” said Benjamin.



Catherine Bao

Catherine Bao is a student at Timpanogos High School in Alpine School District. Since she was in seventh grade, Catherine has been involved in TSA where she has used the skills she developed to compete in technology-based competitions. Her career path evolved as she first began pursuing her dream of a career in biotechnology. However, as she further explored the subject, Catherine discovered that her passion was in promotional design and website development, yet she still had an interest in biotechnology.



“Typically, arts and sciences reside on opposite sides of conceptualization, but I discovered enjoyment in the niche between artistic expression and technology. Promotional design and website development showcased my interests; they established design qualities that allowed me to develop my ideas through aspects of art with technology. TSA showed me a way to embrace my interests without abandoning my earliest dream for STEM.

“With the influx of innovations built around new technical applications, studying computer science would equip me with the skills needed to create those changes. I aim to push niches where art, biology, and computer science overlap,” said Catherine.

1964: The U.S. Presidential Scholars Program was established by executive order of the President, to recognize and honor some of our nation’s most distinguished graduating high school seniors.

1979: The program was extended to recognize students who demonstrate exceptional talent in the visual, creative, and performing arts.

2015: The program was again extended to recognize students who demonstrate ability and accomplishment in career and technical education fields.

Leah Crossley

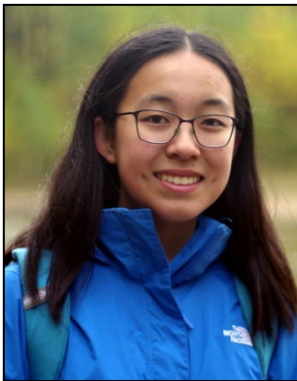
Leah Crossley is a student at Clearfield High School in Davis School District. At the end of her junior year, she completed the Health Science CTE Career Pathway. Her occupational goal is to one day be an anesthesiologist. Leah participated in a work-based learning experience with the Intermountain Healthcare Roy Clinic and is preparing for her externship at the University of Utah Farmington Health Center. Leah will be graduating from high school with an associate degree as a medical assistant.



“The road to these achievements has not been an easy one but has been highly fulfilling. Since I was old enough to flip pages, I would constantly have my father’s college anatomy and physiology book in my hands. Medicine has always been a passion of mine; as a kid, I watched *Bones* with my mom and dreamed of being like Temperance. In my early elementary years, I wanted to be a medical examiner so I could always be gaining more knowledge, solving problems, seeing a person’s true anatomy. Although it has been a great deal of work, it sure is paying off. Not only do I love being involved in medicine and the CTE field in high school, but it is also my passion across all areas of my life,” said Leah.”

Xinying Bi

Xinying Bi is a student at Skyline High School in Granite School District. She has always dreamed about being an engineer, however, she wasn’t sure what type of engineer. Xinying credits CTE in helping her gain the knowledge in multiple areas of engineering.



Since March, Xinying has been participating in an electrochemical engineering lab internship at the University of Utah, where she has been able to apply concepts from school, that she has learned in various science and math classes, to research lithium-ion batteries. In her internship she tests electrolytes in lithium-ion batteries to develop more efficient fast charging batteries for electric vehicles.

“Throughout high school, I was sure I was going to major in engineering, but I never knew what kind. CTE helped me by gaining knowledge in different areas of engineering. I learned about seven disciplines of engineering from an Engineering Principles class at the GTI. This allowed me to get hands-on experience and complete projects about each of the disciplines. I have learned about the research process and applied this to an internship at an electrochemical lab

at the University of Utah, gaining even more hands-on and real-world experience.

“CTE has impacted me the most by providing me with hands-on and real life experiences that have prepared me for the future and my career. I can’t wait to learn more and hope to work with data and productivity in the future,” said Xinying.

Calendar:

December 1: Utah State Board of Education Meeting – 250 East 500 South – Salt Lake City, UT

December 8: Utah State Charter School Board Meeting – 250 East 500 South – Salt Lake City, UT

[Utah CTE Calendar](#) | [ACTE Calendar](#)

Utah CTE classes are open to all qualified students without regard to race, color, national origin, sex, disability, or age.

Utah State Board of Education | Career and Technical Education
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