



America's rural workforce is invaluable.

According to the Bureau of Labor Statistics (BLS), rural areas account for nearly half of America's population and employ over 50% of the country's workforce. The BLS also reports that employment opportunities in rural areas are expected to increase faster than in urban areas through 2024. With rural areas often lacking the services and entertainment needed to attract and retain young people, many young workers miss out on opportunities to be a part of the rural workforce. Rural manufacturers need young talented professionals willing to live and work in rural communities to accommodate the growing demand.

Rural communities are often seen as places where people live simple lives, far removed from the modern conveniences of urban centers. Yet, despite its reputation, rural America has much to offer. In fact, some of the country's most significant inventions came out of rural settings. The Wright brothers' invention of the airplane was born at Kitty Hawk, North Carolina. Thomas Edison developed his light bulb in Menlo Park, New Jersey. Highlighting available career opportunities in rural areas

is an essential step in appealing to young talent — internships are one of the most effective ways to do that. That's why the North Carolina State University Industry Expansion Solutions (IES) is helping to facilitate the Rural Works! internship program.

Elevating the Rural Workforce

Tucked in between acres of corn, cabbage and tobacco fields is the Schindler Escalator Manufacturing Complex of Clinton, NC — a city in Sampson County, North Carolina, with a population of 8,639. The Schindler Escalator Manufacturing Complex is a part of the Schindler Elevator Corporation and the complex comprises a 38,000-square-foot escalator step facility and a 155,000-square-foot escalator assembly plant. Schindler's Clinton plant is the largest U.S. escalator factory in annual output and is committed to sustainability by manufacturing energy-saving escalators and moving walks. Schindler Elevator Corporation was North America's first elevator and escalator company to achieve an ISO 9001 certification.

The Rural Works! internship program supports NC State University's commitment to social, economic, and technological development across North Carolina by offering an engaging internship experience for high-caliber students who work with employers to achieve their workplace goals in rural counties.

Rural Works! was created by a partnership between the Division of Academic and Student Affairs, the Office of Outreach and Engagement and NC State Extension. Rural Works! seeks undergraduate and graduate students from various majors, backgrounds, and skill sets. NC State University Industry Expansion Solutions (IES) supports the program for undergraduates who can be subsidized by the NC State University College of Engineering that have at least a 3.0 GPA. Internships include opportunities with private, public, and nonprofit employers in rural counties. Spearheaded by NC State IES regional manager Anna Mangum, IES has been able to match 55 interns with 37 companies from all across the state for the summer of 2022. One of those companies includes Schindler Escalator Manufacturing Complex.

Moving Forward with Rural Works!

Interning at Schindler is Kaleb Jessup, a fourth-year NC State University mechanical engineering student and a Clinton, NC native with ambitions to become an applied engineer. Jessup is in his third year of the internship but this is the second year he's participated in the Rural Works! program.

"The first time I interned at Schindler was in 2019," says Jessup. Jessup didn't intern in 2020 because of the COVID-19 pandemic but returned to the company in 2021. "When I returned, I was told about the Rural Works! Internship program where NC State would partner with rural organizations to provide half of the intern's compensation.", Jessup said. "We applied for it and got in."

Under the Rural Works! program, NC State University pays high-performing (3.0 GPA minimum) undergraduate engineering students an additional \$15 per hour, plus a participation stipend, making the internship opportunity in rural businesses as competitive as internships in larger, more urban areas of the state. The Rural Works! program has enabled rural organizations to access the best and brightest pool of potential employees like Jessup before they enter the post-graduation job market.

Training the Next Generation

Manager of transit and applications engineer Demis Perez Jr, is Jessup's current mentor at Schindler but he's not his first. "I actually stole him from another department

because I was so impressed with the internship project he presented last year," Perez says jokingly. "I asked if he was interested in applications engineering and the next thing I know, he's in my group and I'm training him."

Perez says he sees significant potential in Jessup. "We've had things in our backlog that no one did until Kaleb came in and took the initiative. The original engineer who worked on it switched to a remote role so Kaleb took on the hands-on aspect of his job." Perez continues, "We have a project going on where we are in the middle of manufacturing a new moving walk product line. They'll be the first of their kind to be installed in the US and Kaleb has been hands-on the entire time. He's also designed some of the custom parts on it. He's working on something that nobody else has worked on. It's even new for the people in the factory so it's been a great learning experience for him."

On top of being proactive and diligent, Perez says Jessup is also inquisitive, constantly yearning to know more about engineering and how the business is being ran; focused on the job in front of him and while also searching for context. "Kaleb has asked more questions than anyone I've ever trained," Perez bantered. "He wants to know how his role plays in the larger scope of things and the questions aren't always departmental. He asks questions about how the business works. I think it's great because it shows me that he's interested in Schindler and not just, 'I'm just here to make some money during the summer.'"

“Kaleb is the first intern I’ve mentored and he’s been a great asset to our team. He always says, ‘Let me help you with this product.’ ‘Do you need something made?’ I’ve heard nothing but great things about him from my co-workers.”

The Perfect Match

Not only is Jessup helping Schindler by interning, but Schindler is also guiding Jessup into what is a promising start to his career. “I enjoy learning about the manufacturing process and try to help wherever needed.”

Jessup recalls his aspirations of becoming an engineer. “One summer, I worked on a pepper packing farm. For eight hours a day, I would just make and stack boxes. I could do it in my sleep. I dreamed about engineering a machine that could make and stack boxes so I wouldn’t have to do it manually anymore.”

Though he always knew he wanted to be an engineer, Jessup wasn’t 100% sure about what type. Jessup cites, “When I started at NC State University, I wanted to work in robotics but discovered that it’s mostly coding. Even though I no longer wanted to pursue a career in robotics, I still wanted to be an engineer and designer. Then I came to Schindler and started prototyping parts and realized I wanted to be an applications engineer. I enjoy the manufacturing process.”

Jessup says he was immersed in the internship from week one. “The first week I was here, they had me read the organization’s 543-page sales manual along with their 2019 codes so I understood everything about escalators.”

Jessup says interning is teaching him lessons before he even learned them in the classroom. “Last year, I used beam bending and stressed calculation knowledge from Solid Mechanics to estimate the tonnage required to bend a piece of bronze vs. stainless decking on a cyril bath stretch former. I remember sitting in class and thinking, ‘I learned that at Schindler!’ I’ve had so many moments like that.”

But not everything can be learned in the classroom. “Being hands-on with the machinery and sitting in on real engineering meetings has put all I learned in class into perspective,” Jessup states. “Also building relationships with everyone in the organization has been a great experience that Schindler has provided me. I know most people on the floor by name; building work relationships, communicating effectively and establishing positive rapport is just as important as any other engineering aspect.”

Each year Jessup says he’s seen himself grow. “Every year I’ve interned, I’ve been given a little more responsibility. Interning at Schindler has given me



confidence by knowing I retained what I learned in the classroom. One of my biggest fears was graduating and finding out I didn’t learn anything. But I know now that I can do it. This entire process has been reassuring.”

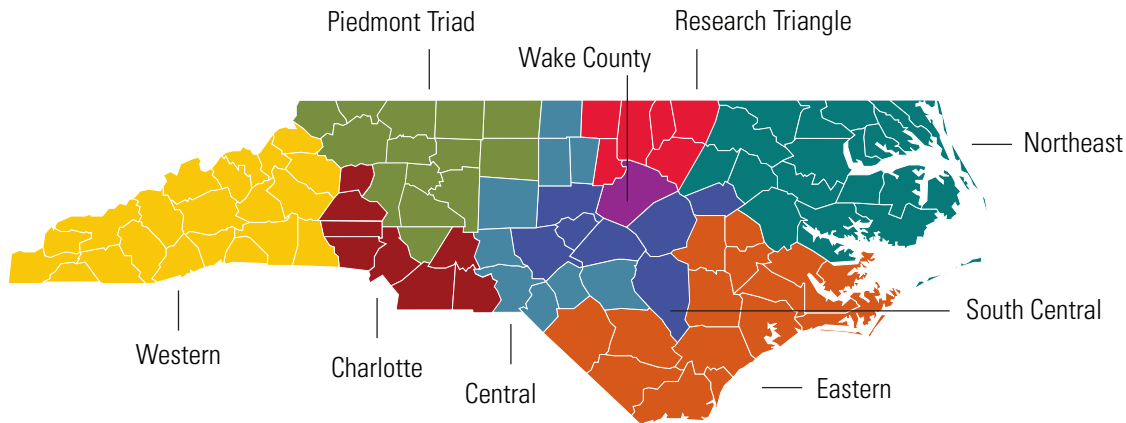
Jessup is delighted to be able to give back to the community that raised him. “I love living in a rural area, so working there is perfect for me.” Jessup’s internship experience is fulfilling the Rural Works! mission of striving to develop pathways for ongoing talent in rural companies and communities while bringing fresh ideas, innovative thought processes and solutions.

Learn more about how your organization can participate in the Rural Works! Program:

careers.dasa.ncsu.edu/rural-works

Regional Managers

NC State University Industry Expansion Solutions (IES) Regional Managers Serve All 100 Counties in North Carolina.



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IES administers the National Institute of Science and Technology Manufacturing Extension Partnership (NIST MEP) for North Carolina (NCMEP), the Southeastern OSHA Training Institute Education Center, the North Carolina Defense Industry Diversification Initiative (NCDIDI), the North Carolina Defense Manufacturing Community Support Program (NC DMCS), the NC State University Minerals Research Lab, North Carolina Awards for Excellence (NCAfE), and the Manufactured in North Carolina (MNC) supply chain database and website.