CAREER DEVELOPMENT EVENTS

Agricultural Communications

MAGAZINE LAYOUT

INTERACTIVE COMPONENT

CDE MAGAZINE LAYOUT INSTRUCTIONS:

Designers will use the press packet and information gathered in the press conference to develop a magazine layout for *FFA New Horizons* using the feature story text written by the news writer. Various photos, graphics, and logos will be provided for use in these layouts. Designers may use any page layout software available (i.e., Canva, Adobe Express, InDesign, etc.) if it appropriately tells the story and represents a design in *FFA New Horizons*. The magazine designer must use the text written by the news writer. Layouts will be saved and submitted in a PDF for judging.

WHAT YOU WILL LEARN FROM THIS RESOURCE:

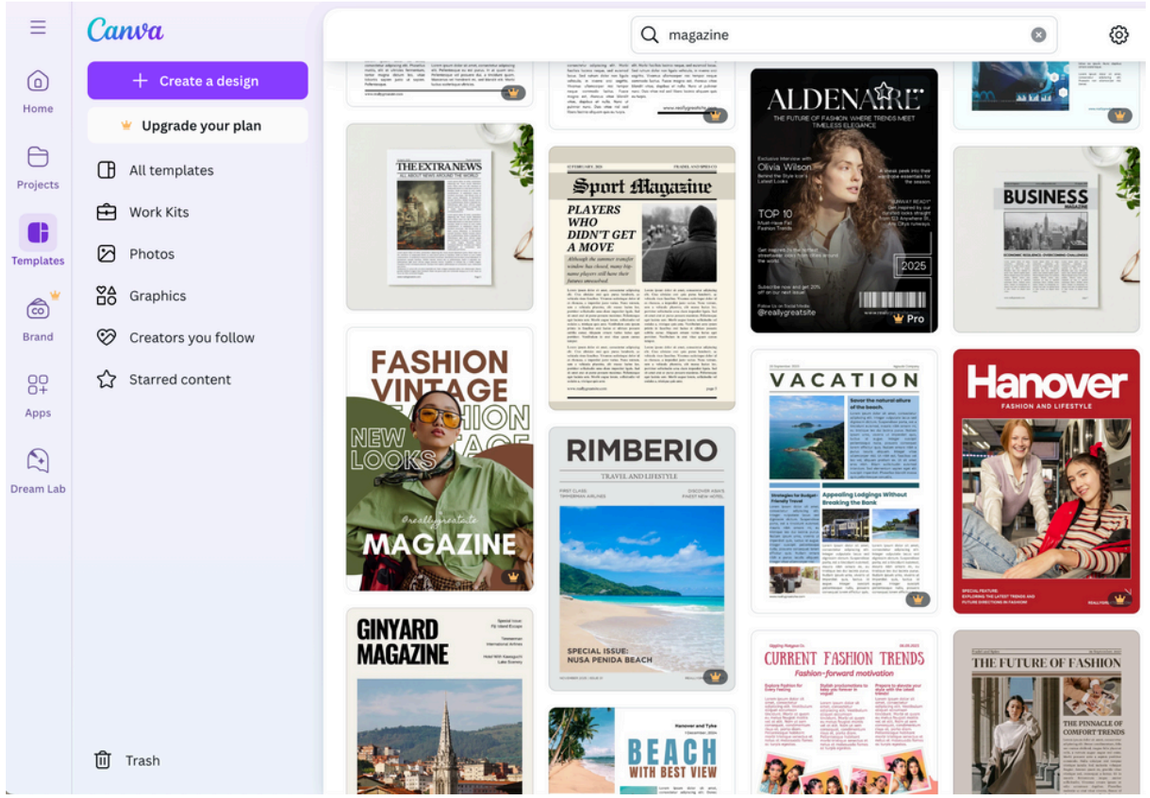
The goal of this resource is to help students prepare for the Agricultural Communications CDE, Magazine Layout Practicum. We will use Canva (a free online design tool) to create a layout of a magazine similar to the one they would create during the CDE competition. For additional preparation resources, please refer to our Ag Com CDE Guidebook and other interactive components for feature writing, broadcast production, the social media plan and communications plan.

WHAT WILL YOU NEED?

- Canva
- Additional Resources Included in Attached Folder
  - You do not have to use these resources or this topic, this is just a starting place for you to practice preparing for the Ag Com CDE.

TUTORIALS

- **Canva Magazine:** https://www.youtube.com/watch?v=jjt-yWJyu6g
- **Magazine Anatomy:** https://www.youtube.com/watch?v=7sSJtScnsjE&t=5s
- **Canva Website:** https://www.youtube.com/watch?v=tmeOOL58KLM
- **Canva Website:** https://www.youtube.com/watch?v=IYs848l482A



WHAT WILL WE CREATE?

This is our goal for the final product—a magazine spread featuring an article from the Spring 2025 edition of the K-State Agriculturist.

To learn more about the Kansas State Agriculturist or to see additional magazine layout examples, please visit communications.k-state.edu

A NEW *Algorithm*

STORY BY *JACY ROSE*

Riley Sleichter and Shelly Kessen alumni share their thoughts about artifical intelligence in the workforce

Across campus, artificial intelligence is a buzzword. While some professors are hesitant about the new technology, others are incorporating AI by using it for writing or generating ideas and finding sources. And some professors have entire projects based on the technology showing the range of possibilities for AI in the classroom.

It is also transforming agriculture as we know it, ushering in a new era of precision, efficiency and data-driven insights. From autonomous tractors to marketing tools that shape consumer engagement, AI is changing how food is grown, harvested and promoted.

Two Kansas State University alumni, Riley Sleichter and Shelly Kessen, are applying AI in their respective sectors of the agriculture industry. Together, they offer insights into AI's role in agriculture today and what professionals in the workforce need to know.

MERGING AG AND TECH

Growing up on his family's farm in Abilene, Kansas, Riley Sleichter enjoyed working with the advancing technology of the farm equipment. This led him to an undergraduate degree in agribusiness, followed by a master's degree in biological and agricultural engineering.

"I wanted to find a career at the intersection of agriculture and technology, and that's what led me to K-State," Sleichter says. Today, he is a product engineer at John Deere where he is currently part of a team working to deploy self-driving tractors across the Midwest.

He shares that a major challenge for the agriculture industry is the labor shortage. To address this problem, he and his team are working to increase the efficiency of the tools that farmers use.

"I focus on making large agriculture autonomous," Sleichter says. "So, taking all of our existing products and making them drive themselves."

By developing autonomous machinery, Sleichter and his team aim to reduce the dependence on manual labor, allowing farmers to manage larger areas with fewer workers and freeing up time for other important tasks.

COMPUTER LEARNING

Sleichter explains that the terms AI and artificial neural networks are synonymous. AI is a system that teaches computers to make decisions based on data. Instead of coding every single task, engineers provide the AI with enough example data sets so the program can perform its own.

"At the foundational level, computers are dumb," Sleichter says. "They have no idea what they're supposed to do unless you tell them very explicitly. AI allows us to teach the computer how to make decisions."

While computers rely on explicit instructions, AI changes things by letting them learn from patterns in the data provided.

"As humans, we can provide a large set of correct examples to train a computer," Sleichter says. "For instance, if we want to teach a neural network to recognize cows in images, we can feed it a million pictures of cows and tell the computer, 'this is a cow.' Then the computer will learn from the images and create its own way of identifying cows."

One of Sleichter's projects as a graduate student at K-State's FarmsLab involved planting seeds with precision. Cameras were added to the row units on planters and used machine learning to track exactly where each seed was planted using GPS coordinates.

"In precision ag we farm every square acre independently. We wanted to push that envelope and see if we could get more finite than that; instead, can we farm every plant independently?" Sleichter says. "Though we tested it on a small scale, the concept worked. This level of precision could offer farmers new ways to manage crops."

Despite rapid advancements, he emphasized neural networks, like all AI systems, have their limitations.

"All AI does is predict things. It's only as smart as the data we provide it," Sleichter says.

INTELLIGENT MARKETING

While Sleichter focuses on precision AI, Kessen uses AI differently in her role as senior vice president and partner at FleishmanHillard. In her company she works with agribusiness clients to develop strategies to tell their stories.

She says AI is becoming a valuable tool for everyday tasks, but she stressed that it is not about replacing people — it is about making their jobs easier.

"AI will not replace humans," Kessen says. "I heard it said once, 'power tools didn't replace the carpenter.' AI is just a tool to help us do our jobs better."

She explains that one of her coworkers, a designer, uses AI tools to speed up the creative process and generate new ideas. Kessen believes this is the right approach.

"This technology is the worst it will ever be because it's only going to get better," Kessen says. She advises others to "lean into AI, don't be afraid of it."

Kessen also believes the people most successful moving forward will be the ones who develop skills AI cannot replicate — like creativity, critical thinking and collaboration.

Her advice to students is to: "Hone your soft skills — those are what set humans apart."

BALANCING ETHICS

Both Sleichter and Kessen agree that AI will play a large role in agriculture's future, but it will require people to embrace the opportunity and learn how the tool can benefit them in the workplace and with life tasks.

"No one knows all the implications of AI. I think of it as a crystal ball era," Kessen says.

Sleichter sees AI having the most significant impact in two areas: autonomous machines and better data analysis.

> **"THE PEOPLE WHO SUCCEED WILL BE THE ONES WHO LEVERAGE AI TO HELP THEIR FARMS AND BUSINESSES THRIVE."**
>
> *— Riley Sleichter, John Deere Product Engineer*

"In terms of efficiency and profitability, we are hitting the upper limit of what we can do manually," Sleichter says. "To take production ag to the next level, we need machines that can make decisions on their own."

He also emphasizes the ethical responsibility that comes with building AI systems.

"The developers who create these neural networks have a lot of power," Sleichter says. "They can build something really powerful for good — or not."

DEVELOPING EXPERTISE

For those entering the agriculture workforce, both Kessen and Sleichter recommend developing a fundamental understanding of technology.

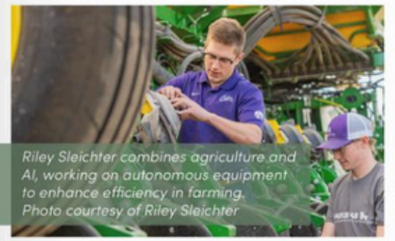
"Every person should have digital dexterity," Sleichter says. "That means understanding how computers and programming work, even at a basic level."

Kessen agrees, adding that those who lean into AI will be the ones who succeed.

Both Kessen and Sleichter say that while AI applications can help with tasks and efficiency, there will always be a place for people agriculture, but it will be an essential tool in the work environment.

"One thing AI will never be able to do is express emotion," Sleichter says. "If you think about it, many fields in agriculture are emotion-based. AI will never replace roles like commodity markets and sales, but it can supplement them."

With that in mind, Sleichter offers this bit of advice for those thinking about how to best use AI in the future. "The people who succeed will be the ones who leverage AI to help their farms and businesses thrive." KS



Riley Sleichter combines agriculture and AI, working on autonomous equipment to enhance efficiency in farming. Photo courtesy of Riley Sleichter

Shelly Kessen says AI is a tool that can help people do their jobs better. Photo courtesy of Shelly Kessen

YOUR TURN!

Now, we want to give you an opportunity to practice what you've learned so far! Using the Concept Bank to the right, create your own version of the spread we have been studying in this package and in the guidebook. Feel free to use your own colors, fonts, quotes i and organization of the pieces.

You have been provided with materials to create your own magazine spread. You are encouraged to recall the rules of design and publication layout that we have been studying, and you are welcome to reference these throughout the process. There are several ways to lay out a spread, so feel free to do multiple different versions to give yourself extra practice!

CONCEPT BANK

- *Title*
- *Subhead*
- *Byline*
- *Pull quote(s)*
- *Story Subheads*
- *Photos*
- *Photo Captions*
- *Folio*
- *Page Numbers*
- *Tag(s)*
- *Graphics*
- *Columns*
- *Fonts*
- *Background (color, photo, design)*
- *Credits*
- *Paragraph Breaks*

ANSWER GUIDE CAN BE FOUND BELOW!

YOUR STORY

Use the story below to create your own magazine spread!

You have also been given access to a folder with photos for you to choose from for this spread! You do not need to use all of the photos, but you are free to build the spread however you think honors the rules of design and helps to tell the story. Click HERE for the link.

K-State Agricultural Communications: Shaping the Future of Farming through Innovation and Education

At Kansas State University (Kansas State), agriculture is not just a field of study—it's a passion, a commitment to the future of food and a gateway to connecting rural and urban communities. Among the many facets of Kansas State's agricultural programs, the Department of Agricultural Communications and Agricultural Education stands as a cornerstone, helping to bridge the gap between the science of agriculture and the public through strategic communication, education and outreach.

In a world where information about food production, sustainability and technological innovation is often misunderstood, agricultural communicators at Kansas State play a critical role in ensuring that the public, policymakers and farmers are equipped with the knowledge they need to make informed decisions. From educating the next generation of ag communicators to spearheading innovative outreach programs, K-State is leading the way in agricultural communication and education.

The Heart of Agricultural Communications at K-State

The Department of Agricultural Communications and Agricultural Education at Kansas State is dedicated to preparing students to be the future leaders in agricultural communication, education and leadership. The program, one of the largest of its kind in the nation, provides students with the skills necessary to navigate the ever-evolving world of agriculture and communication.

From writing press releases, managing social media accounts and creating multimedia content to engaging with the community through public outreach, students are immersed in the real-world skills that define successful agricultural communicators. Under the guidance of expert faculty members, students also have access to cutting-edge technologies and communication strategies, preparing them for the demands of a dynamic industry.

"It's a great time to be in agricultural communications," Madeline Drake, a Department of Agricultural Communications and Agricultural Education Ambassador, said.

"With the growth of digital media and technology, there are more ways than ever for ag communicators to reach a diverse audience. At Kansas State, we prepare our students to harness those tools and tell compelling stories that connect people with the future of food and farming."

Bridging the Urban-Rural Divide

One of the greatest challenges in agricultural communications is the growing disconnect between urban consumers and rural agriculture. As urban populations continue to expand, fewer people have a direct connection to farming, leading to misconceptions and misunderstandings about where food comes from and how it is produced. This divide has profound implications for everything from policy decisions to consumer preferences. At Kansas State, agricultural communicators are trained to tackle these challenges head-on, ensuring that the stories of farmers, ranchers and

agricultural innovators are shared with authenticity and clarity. At Kansas State, agricultural communicators are trained to tackle these challenges head-on, ensuring that the stories of farmers, ranchers and agricultural innovators are shared with authenticity and clarity.

Students participate in hands-on projects, internships and community engagement programs that provide them with direct experience in connecting agricultural producers to the public.

For example, students at Kansas State frequently work with local farmers to create content that showcases the innovations taking place on the farm. These stories are shared through various media outlets, from traditional newspapers and magazines to social media platforms like Instagram and Twitter, helping to humanize the faces behind the food on our tables.

Innovation in Agricultural Communication

One of the key strengths of Kansas State's agricultural communications program is its emphasis on innovation. With the rapid growth of digital platforms and communication tools, the university has equipped its students with the latest technologies and methods to tell compelling agricultural stories in new and engaging ways.

For example, the department has invested in multimedia training, teaching students how to create professional video, audio and digital content that can be used across a variety of platforms. Whether it's producing podcasts that dive into the science of agriculture or crafting YouTube videos that explore sustainable farming practices, Kansas State students are prepared to be leaders

producers to the public.

For example, students at Kansas State frequently work with local farmers to create content that showcases the innovations taking place on the farm. These stories are shared through various media outlets, from traditional newspapers and magazines to social media platforms like Instagram and Twitter, helping to humanize the faces behind the food on our tables.

Innovation in Agricultural Communication

One of the key strengths of Kansas State's agricultural communications program is its emphasis on innovation. With the rapid growth of digital platforms and communication tools, the university has equipped its students with the latest technologies and methods to tell compelling agricultural stories in new and engaging ways.

For example, the department has invested in multimedia training, teaching students how to create professional video, audio and digital content that can be used across a variety of platforms. Whether it's producing podcasts that dive into the science of agriculture or crafting YouTube videos that explore sustainable farming practices, n the digital age of agricultural communication.

Engaging the Next Generation of Agricultural Leaders

Kansas State's commitment to agricultural communications extends beyond its classrooms. Through outreach programs, events and initiatives, the university works to inspire and engage the next generation of agricultural leaders. Students in the agricultural communications program are involved in planning and executing these events, helping to foster a deeper understanding of agriculture

among youth in the state.

Additionally, the department offers scholarships and internships that give students the opportunity to work alongside professionals in the agricultural industry. These hands-on experiences allow students to apply what they've learned in the classroom to real-world situations, building a portfolio that can launch their careers in agricultural communications.

"Being able to work with industry professionals during my time at Kansas State gave me invaluable experience," Jenna Fiscus, an undergraduate student at Kansas State in the Agricultural and Natural Resource Communications, said. "The skills I developed in writing, photography and social media management were essential as I prepare to transition into my career, and I'm proud to be part of an industry that is so vital to our future."

A Vision for the Future

As the agricultural industry faces new challenges—from climate change and sustainability concerns to technological advancements and shifting consumer expectations—agricultural communications will become even more critical in shaping public understanding and policy.

Kansas State is preparing its students to meet these challenges head-on with a clear vision for the future of agricultural communication.

"Effective communication is more important than ever," Drake said. "As the industry continues to evolve, the ability to translate complex agricultural topics into clear, accessible messages will be essential for ensuring the future of food security, sustainability and innovation. We are proud to be at the forefront of this movement, and students in the program are ready to lead the way."

Through its commitment to innovation, education and public engagement, Kansas State's agricultural communications program is helping to shape the future of farming, ensuring that the stories of farmers and agricultural innovators are told with clarity and impact. In an ever-changing world, K-State is preparing the next generation of agricultural communicators to bring the world closer to the food that sustains us all.

THE BONES:

First page your visitor sees.

- TITLE
  - IMPORTANT!
    - INCLUDE THE TITLE OF YOUR SPREAD. IN THIS CASE IT IS THE TITLE OF THE STORY

- BYLINE AND SUBHEAD
  - THE BYLINE INFORMS THE READER WHO WROTE THE STORY, AND THE SUBHEAD IS A SLIGHTLY MORE IN-DEPTH EXPLANATION OF THE STORY CONTENTS

INNOVATION

A NEW *Algorithm*

STORY BY *JACY ROSE*

Riley Sleichter and Shelly Kessen alumni share their thoughts about artifical intelligence in the workforce

Across campus, artificial intelligence is a buzzword. While some professors are hesitant about the new technology, others are incorporating AI by using it for writing or generating ideas and finding sources. And some professors have entire projects based on the technology showing the range of possibilities for AI in the classroom.

It is also transforming agriculture as we know it, ushering in a new era of precision, efficiency and data-driven insights. From autonomous tractors to marketing tools that shape consumer engagement, AI is changing how food is grown, harvested and promoted.

Two Kansas State University alumni, Riley Sleichter and Shelly Kessen, are applying AI in their respective sectors of the agriculture industry. Together, they offer insights into AI's role in agriculture today and what professionals in the workforce need to know.

MERGING AG AND TECH

Growing up on his family's farm in Abilene, Kansas, Riley Sleichter enjoyed working with the advancing technology of the farm equipment. This led him to an undergraduate degree in agribusiness, followed by a master's degree in biological and agricultural engineering.

"I wanted to find a career at the intersection of agriculture and technology, and that's what led me to K-State," Sleichter says.

Today, he is a product engineer at John Deere where he is currently part of a team working to deploy self-driving tractors across the Midwest.

He shares that a major challenge for the agriculture industry is the labor shortage. To address this problem, he and his team are working to increase the efficiency of the tools that farmers use.

"I focus on making large agriculture autonomous," Sleichter says. "So, taking all of our existing products and making them drive themselves."

By developing autonomous machinery, Sleichter and his team aim to reduce the dependence on manual labor, allowing farmers to manage larger areas with fewer workers and freeing up time for other important tasks.

COMPUTER LEARNING

Sleichter explains that the terms AI and artificial neural networks are synonymous. AI is a system that teaches computers to make decisions based on data. Instead of coding every single task, engineers provide the AI with enough example data sets so the program can perform its own.

"At the foundational level, computers are dumb," Sleichter says. "They have no idea what they're supposed to do unless you tell them very explicitly. AI allows us to teach the computer how to make decisions."

While computers rely on explicit instructions, AI changes things by letting them learn from patterns in the data provided.

"As humans, we can provide a large set of correct examples to train a computer," Sleichter says. "For instance, if we want to teach a neural network to recognize cows in images, we can feed it a million pictures of cows and tell the computer, 'this is a cow.' Then the computer will learn from the images and create its own way of identifying cows."

One of Sleichter's projects as a graduate student at K-State's FarmsLab involved planting seeds with precision. Cameras were added to the row units on planters and used machine learning to track exactly where each seed was planted using GPS coordinates.

"In precision ag we farm every square acre independently. We wanted to push that envelope and see if we could get more finite than that; instead, can we farm every plant independently?" Sleichter says. "Though we tested it on a small scale, the concept worked. This level of precision could offer farmers new ways to manage crops."

Despite rapid advancements, he emphasized neural networks, like all AI systems, have their limitations.

"All AI does is predict things. It's only as smart as the data we provide it," Sleichter says.

- SUBSECTIONS
  - SUBSECTIONS ARE A GREAT WAY TO BREAK THE CONTENT UP INTO MORE DIGESTIBLE PIECES FOR THE READER

- COLUMN STRUCTURE
  - IT IS IMPORTANT TO MAINTAIN CONSISTENCY THROUGHOUT THE PUBLICATION, WHETHER YOU ARE DOING 2 OR 3 COLUMNS

INTELLIGENT MARKETING

While Sleichter focuses on precision AI, Kessen uses AI differently in her role as senior vice president and partner at FleishmanHillard. In her company she works with agribusiness clients to develop strategies to tell their stories.

She says AI is becoming a valuable tool for everyday tasks, but she stressed that it is not about replacing people — it is about making their jobs easier.

"AI will not replace humans," Kessen says. "I heard it said once, 'power tools didn't replace the carpenter.' AI is just a tool to help us do our jobs better."

She explains that one of her coworkers, a designer, uses AI tools to speed up the creative process and generate new ideas. Kessen believes this is the right approach.

"This technology is the worst it will ever be because it's only going to get better," Kessen says. She advises others to "lean into AI, don't be afraid of it."

Kessen also believes the people most successful moving forward will be the ones who develop skills AI cannot replicate — like creativity, critical thinking and collaboration.

Her advice to students is to: "Hone your soft skills — those are what set humans apart."

BALANCING ETHICS

Both Sleichter and Kessen agree that AI will play a large role in agriculture's future, but it will require people to embrace the opportunity and learn how the tool can benefit them in the workplace and with life tasks.

"No one knows all the implications of AI. I think of it as a crystal ball era," Kessen says.

Sleichter sees AI having the most significant impact in two areas: autonomous machines and better data analysis.

> **"THE PEOPLE WHO SUCCEED WILL BE THE ONES WHO LEVERAGE AI TO HELP THEIR FARMS AND BUSINESSES THRIVE."**
>
> — *Riley Sleichter, John Deere Product Engineer*

"In terms of efficiency and profitability, we are hitting the upper limit of what we can do manually," Sleichter says. "To take production ag to the next level, we need machines that can make decisions on their own."

He also emphasizes the ethical responsibility that comes with building AI systems.

"The developers who create these neural networks have a lot of power," Sleichter says. "They can build something really powerful for good — or not."

DEVELOPING EXPERTISE

For those entering the agriculture workforce, both Kessen and Sleichter recommend developing a fundamental understanding of technology.

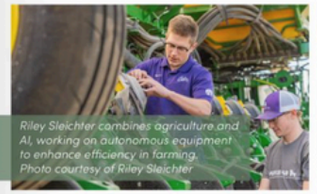
"Every person should have digital dexterity," Sleichter says. "That means understanding how computers and programming work, even at a basic level."

Kessen agrees, adding that those who lean into AI will be the ones who succeed.

Both Kessen and Sleichter say that while AI applications can help with tasks and efficiency, there will always be a place for people agriculture, but it will be an essential tool in the work environment.

"One thing AI will never be able to do is express emotion," Sleichter says. "If you think about it, many fields in agriculture are emotion-based. AI will never replace roles like commodity markets and sales, but it can supplement them."

With that in mind, Sleichter offers this bit of advice for those thinking about how to best use AI in the future. "The people who succeed will be the ones who leverage AI to help their farms and businesses thrive." KS



Riley Sleichter combines agriculture and AI, working on autonomous equipment to enhance efficiency in farming. Photo courtesy of Riley Sleichter

Shelly Kessen says AI is a tool that can help people do their jobs better. Photo courtesy of Shelly Kessen

- PHOTOS & CAPTIONS
  - PHOTOS THAT ARE SPECIFIC TO THE STORY OR RELATED TO YOUR CONTENT ARE GREAT WAYS TO CATCH THE ATTENTION OF YOUR READER. CAPTIONS ARE VITAL TO EXPLAIN THE ACTION DEPICTED IN THE PHOTOS

- FOLIO
  - FOLIOS ARE AN ADDITIONAL IDENTIFIER OF THE STORY. THEY HELP TO INFORM THE READER WHERE THEY ARE IN THE PUBLICATION, AS WELL AS TO HELP GROUP STORIES TOGETHER.

THE DETAILS:

We do not need to just copy past the story from the writer's WordDoc or other submission, that would not be stylistic or catch the eye of our reader. Instead, we need to be intentional in designing pieces to enhance the story.

- **TAGS**
  - **THIS ALLOWS READERS TO SEE WHAT CATEGORY OR SECTION THE STORY FALLS INTO, AS WELL AS HELPING A READER NAVIGATE TO A SPECIFIC STORY FROMT HE TABLE OF CONTENTS**

- **GRAPHICS**
  - **THIS STYLISTIC PIECE ADDS CONTEXT TO THE STORY AND ALLOWS THE READER TO GET AN IDEA OF THE CONTENT THEY ARE ABOUT TO READ**

- **IDENTIFICATION**
  - **ALWAYS INCLUDE PAGE NUMBERS, USUALLY WITH EVEN NUMBERS BEGINNING ON THE LEFT HAND PAGE OF THE SPREAD. THE TEXT NEXT TO THE PAGE NUMBER IS CALLED THE FOLIO AND IT IS A WAY TO IDENTIFY THE PUBLICATION IF SEEN IN PASSING**

- **FONTS**
  - **FONTS AND TYPOGRAPHY ARE A GREAT WAY TO ENHANCE THE APPEARANCE OF A STORY AND ADD DEPTH TO THE CONTENT**

- **PULL QUOTES**
  - **PULL QUOTES ARE A GREAT WAY TO EMPHASIZE THE SUBJECT'S IDEAS AND DRAW THE READER INTO A STORY**

INNOVATION

A NEW Algorithm

STORY BY JACY ROSE

Riley Sleichter and Shelly Kessen alumni share their thoughts about artifical intelligence in the workforce

Across campus, artificial intelligence is a buzzword. While some professors are hesitant about the new technology, others are incorporating AI by using it for writing or generating ideas and finding sources. And some professors have entire projects based on the technology showing the range of possibilities for AI in the classroom.

It is also transforming agriculture as we know it, ushering in a new era of precision, efficiency and data-driven insights. From autonomous tractors to marketing tools that shape consumer engagement, AI is changing how food is grown, harvested and promoted.

Two Kansas State University alumni, Riley Sleichter and Shelly Kessen, are applying AI in their respective sectors of the agriculture industry. Together, they offer insights into AI's role in agriculture today and what professionals in the workforce need to know.

MERGING AG AND TECH

Growing up on his family's farm in Abilene, Kansas, Riley Sleichter enjoyed working with the advancing technology of the farm equipment. This led him to an undergraduate degree in agribusiness, followed by a master's degree in biological and agricultural engineering.

"I wanted to find a career at the intersection of agriculture and technology, and that's what led me to K-State," Sleichter says.

Today, he is a product engineer at John Deere where he is currently part of a team working to deploy self-driving tractors across the Midwest.

He shares that a major challenge for the agriculture industry is the labor shortage. To address this problem, he and his team are working to increase the efficiency of the tools that farmers use.

"I focus on making large agriculture autonomous," Sleichter says. "So, taking all of our existing products and making them drive themselves."

By developing autonomous machinery, Sleichter and his team aim to reduce the dependence on manual labor, allowing farmers to manage larger areas with fewer workers and freeing up time for other important tasks.

COMPUTER LEARNING

Sleichter explains that the terms AI and artificial neural networks are synonymous. AI is a system that teaches computers to make decisions based on data. Instead of coding every single task, engineers provide the AI with enough example data sets so the program can perform its own.

"At the foundational level, computers are dumb," Sleichter says. "They have no idea what they're supposed to do unless you tell them very explicitly. AI allows us to teach the computer how to make decisions."

While computers rely on explicit instructions, AI changes things by letting them learn from patterns in the data provided.

"As humans, we can provide a large set of correct examples to train a computer," Sleichter says. "For instance, if we want to teach a neural network to recognize cows in images, we can feed it a million pictures of cows and tell the computer, 'this is a cow.' Then the computer will learn from the images and create its own way of identifying cows."

One of Sleichter's projects as a graduate student at K-State's FarmsLab involved planting seeds with precision. Cameras were added to the row units on planters and used machine learning to track exactly where each seed was planted using GPS coordinates.

"In precision ag we farm every square acre independently. We wanted to push that envelope and see if we could get more finite than that; instead, can we farm every plant independently?" Sleichter says. "Though we tested it on a small scale, the concept worked. This level of precision could offer farmers new ways to manage crops."

Despite rapid advancements, he emphasized neural networks, like all AI systems, have their limitations.

"All AI does is predict things. It's only as smart as the data we provide it," Sleichter says.

INTELLIGENT MARKETING

While Sleichter focuses on precision AI, Kessen uses AI differently in her role as senior vice president and partner at FleishmanHillard. In her company she works with agribusiness clients to develop strategies to tell their stories.

She says AI is becoming a valuable tool for everyday tasks, but she stressed that it is not about replacing people — it is about making their jobs easier.

"AI will not replace humans," Kessen says. "I heard it said once, 'power tools didn't replace the carpenter.' AI is just a tool to help us do our jobs better."

She explains that one of her coworkers, a designer, uses AI tools to speed up the creative process and generate new ideas. Kessen believes this is the right approach.

"This technology is the worst it will ever be because it's only going to get better," Kessen says. She advises others to "lean into AI, don't be afraid of it."

Kessen also believes the people most successful moving forward will be the ones who develop skills AI cannot replicate — like creativity, critical thinking and collaboration.

Her advice to students is to: "Hone your soft skills — those are what set humans apart."

BALANCING ETHICS

Both Sleichter and Kessen agree that AI will play a large role in agriculture's future, but it will require people to embrace the opportunity and learn how the tool can benefit them in the workplace and with life tasks.

"No one knows all the implications of AI. I think of it as a crystal ball era," Kessen says.

Sleichter sees AI having the most significant impact in two areas: autonomous machines and better data analysis.

> "THE PEOPLE WHO SUCCEED WILL BE THE ONES WHO LEVERAGE AI TO HELP THEIR FARMS AND BUSINESSES THRIVE."
>
> — *Riley Sleichter, John Deere Product Engineer*

"In terms of efficiency and profitability, we are hitting the upper limit of what we can do manually," Sleichter says. "To take production ag to the next level, we need machines that can make decisions on their own."

He also emphasizes the ethical responsibility that comes with building AI systems.

"The developers who create these neural networks have a lot of power," Sleichter says. "They can build something really powerful for good — or not.

DEVELOPING EXPERTISE

For those entering the agriculture workforce, both Kessen and Sleichter recommend developing a fundamental understanding of technology.

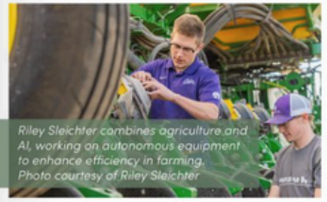
"Everyone person should have digital dexterity," Sleichter says. That means understanding how computers and programming work, even at a basic level."

Kessen agrees, adding that those who lean into AI will be the ones who succeed.

Both Kessen and Sleichter say that while AI applications can help with tasks and efficiency, there will always be a place for people in agriculture, but it will be an essential tool in the work environment.

"One thing AI will never be able to do is express emotion," Sleichter says. "If you think about it, many fields in agriculture are emotion-based. AI will never replace roles like commodity markets and sales, but it can supplement them."

With that in mind, Sleichter offers this bit of advice for those thinking about how to best use AI in the future. "The people who succeed will be the ones who leverage AI to help their farms and businesses thrive."



Riley Sleichter combines agriculture and AI, working on autonomous equipment to enhance efficiency in farming. Photo courtesy of Riley Sleichter

Shelly Kessen says AI is a tool that can help people do their jobs better. Photo courtesy of Shelly Kessen

CONCLUSION:

We hope you find this Magazine Layout template useful as you prepare for you Agricultural Communications CDE. You can find the link to the Spring 2025 edition of the Kansas State Agriculturist in the Magazine Layout Resource Folder. Please use this as a resource and a access point to more examples. Feel free to use these tools along side Canva to practice putting content and key pieces together that will be useful as a Magazine Layout. Good luck as your prepare and compete for the Agricultural Communications CDE.

KANSAS STATE UNIVERSITY

Agricultural Communications