The Columbian
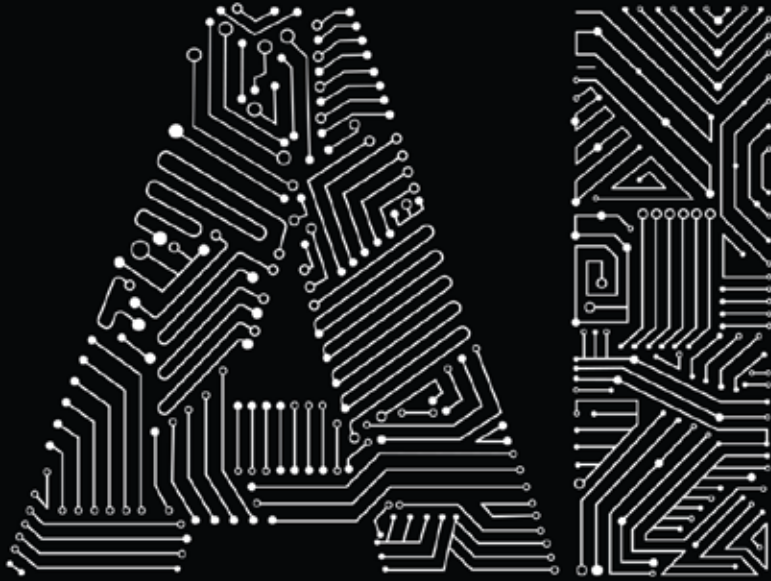
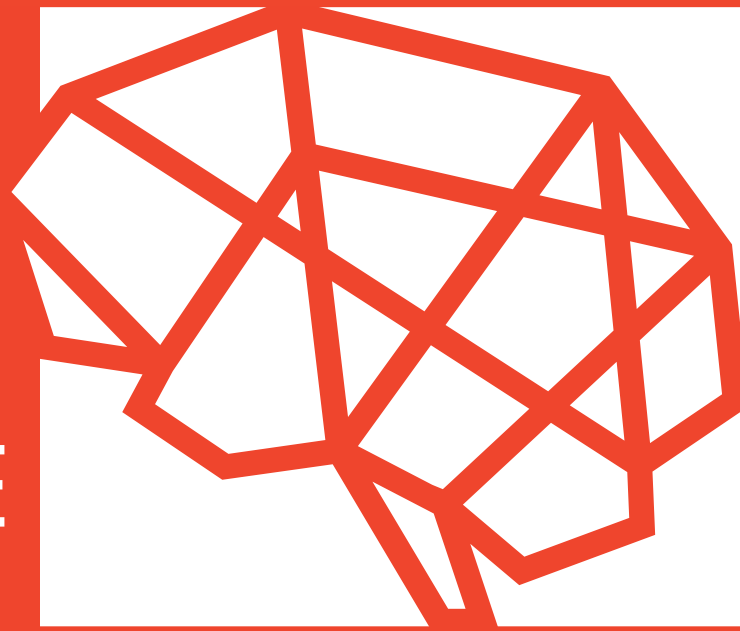# AI IN CLARK COUNTY

ECONOMIC IMPACT OF ARTIFICIAL INTELLIGENCE

2024 CLARK COUNTY ECONOMIC FORECAST

ECONOMIC IMPACT OF ARTIFICIAL INTELLIGENCE

2024 CLARK COUNTY ECONOMIC FORECAST

The Columbian

THANK YOU FOR JOINING US FOR THE COLUMBIAN 38TH ANNUAL ECONOMIC FORECAST BREAKFAST.
Our topic was how artificial intelligence is transforming local business and shaping the future of our economy. Our panel of experts shared insights and strategies for leveraging the power of AI to drive growth and innovation.

PRESENTED BY

Riverview BANK

Tickets go on sale at the beginning of every year. For questions or comments, please email will.campbell@columbian.com

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KEYNOTE SPEAKER

David Adkins
Sr. Engineering Manager,
Generative AI
Meta AI

PANEL DISCUSSION WITH

Krystal Daibes Higgins, CFA
Vice President of Equity Research
Ferguson Wellman

Dave Barcos
Director of Business Development,
Formos Founder,
North Bank Innovations

Will Campbell
Associate Editor
The Columbian

ECONOMIC FORECAST BY

Scott Bailey
Economist

Follow the latest local news at www.columbian.com

My findings and questions as we enter the edge of the AI storm

The Columbian purposefully isn't using AI now, but we are anticipating its effects

Will Campbell
Associate Editor
and Co-owner
The Columbian

by WILL CAMPBELL

I heard something strange while driving along the tree-lined Old Evergreen Highway one February morning in light rain. It was a podcast about the beginning of ChatGPT that made me pull over, take out a notebook and write down what might be the strangest thing about Artificial Intelligence I've heard.

The podcast from the Wall Street Journal was called "Artificial: The OpenAI Story." The reporter's voice through my car speakers summed up an interview with Sam Altman, the CEO of OpenAI, the company that owns ChatGPT. Altman said that before the version of ChatGPT that we all know launched in November 2022, OpenAI had no idea how they were going to make money with its AI product.

Altman and the founders sat down with their investors and told them that unusual revelation, but he also said that after they created an AI model, they'd ask it how to generate revenue, and then it would tell them what to do. How to make money.

"We've made a soft promise to investors that, 'Once we build a generally intelligent system, that basically we will ask it to figure out a way to make an investment return for you,' said Altman."

As raindrops gathered on my windshield, I marked notes about the story. That idea to let AI figure out how to make money is, in a way, unbelievable. In another way, that seems to target a lot of our very real fears of AI. Will it outthink and outperform humans?

I flicked on my car's wipers to see clearly as I pulled back into the road, but I couldn't stop thinking about that idea.

Asking the AI

A few days later, I needed to find the Wall Street Journal story I heard and the interview again for a better reference. I flipped open my laptop, but I didn't want to listen to the podcast again in the booth with no headphones. So I went online to find it. A sudden idea led me to experiment first: I opened a browser ChatGPT's webpage to ask it: "How was ChatGPT first supposed to make money?"

It answered: "When GPT-3 was first developed, OpenAI's plan for monetization involved offering access to the API through subscription-based services or licensing agreements with businesses and developers. By providing access to the language model's capabilities, OpenAI aimed to generate revenue through usage fees, similar to how other cloud-based AI services operate. Additionally, OpenAI explored potential applications in fields such as customer service, content generation, and natural language understanding, where organizations could integrate GPT-3 into their products or workflows and pay for the services rendered."

Okay, so not the same thing that Altman said. But maybe the AI already knew the money-making methods it gave me at the time Altman gave his interview… Or more realistically, maybe it didn't have access to Altman's interview. Maybe it found an easier answer to give me.

The different results I found left me guessing: What information does it have access to, and how accurate are the results?

Finding information myself

I had to go to the Wall Street Journal's website to find that interview from its podcast. Maybe they had it in a written form. After a quick search, I found it, but I had to buy a Wall Street Journal subscription to access it. And yes, I found a transcript of the podcast with the original Altman interview. (ironically, the transcript was written with the help of a "transcription service," or in other words, a form of AI; there was a disclaimer right above the text.)

Now, this weird reporting journey of mine is a good example of some of the shortcomings of two things: current AI's ability to find and report information. And users' ability to ask the AI specifically what they want. But there's a third thing in play here: ChatGPT couldn't access the information in the Wall Street Journal.

But wait a minute. As I looked deeper into The Wall Street Journal's podcast, I saw that the reporter used a recording of Altman's interview with another source: StrictlyVC. I found the YouTube video of Altmans' interview that WSJ had nothing to do with. (https://youtu.be/TzcJlKg2Rc0)

So this journalist had found this anecdote that gives an interesting context to the ChatGPT story and made it interesting to me. I was more informed because of it. Was that worth the cost of the subscription? OR would the free ChatGPT version be enough to satisfy me?

The internet is just a mishmash of information, and here's the world we live in: Who do I trust? Should I trust AI's response or should I trust the Wall Street Journal's reporter? Should I even trust that what Sam Altman said is true?

Local news

Publishers of traditional, trusted news media and journalists alike are worried that people are going to trust AI instead of them. The Columbian is no exception. The Columbian has a newsroom staff of almost 30 people who have deep networks in our community, who interview many sources, who write stories with your interests at heart, who edit stories, who scrutinize everything, who take photographs of the people in our community, who publish stories – and then get feedback and correct stories if something is wrong. AI can't do most of that.

Roger Lynch, CEO of media company Condé Nast, said this last month: "Journalism is fundamentally a human pursuit. And it plays a central and irreplaceable role in our society and our democracy. It takes reporters with grit, integrity, vision and human creativity to develop the stories that allow free markets, free speech and freedom itself to thrive."

He said that to a U.S. Senate subcommittee that's considering what regulations to put on Artificial Intelligence because AI is accessing their copyrighted content and reworking it to make it free to anyone online. Publishers are simultaneously fighting over copyright laws and collaborating with AI companies. Local newsrooms and local journalists are already struggling to find a sustainable revenue model, and AI could either help or harm that effort.

In one possible future, newsrooms could use AI to help their reporting and ability to sustain their jobs by finding revenue and also have the trusted, human community member be the author. At the same time, AI would be making free information online even less factual and more manipulative, driving readers to trusted news sources.

In another possible future, AI could steal local journalists' stories and inaccurately regurgitate them to readers for free, which saps revenue from local newsrooms and degrades trusted, accurate local news and local jobs.

AI is a tool that advances how information is produced, processed and consumed. It is neither good nor bad, and it will simultaneously hurt and help humanity. We will adapt and accept it like all other past technologies.

Will Campbell is the Associate Editor and fourth-generation co-owner of The Columbian. He assists in the newsroom's innovation, public outreach and leads the award-winning Community Funded Journalism program that added five additional reporters to the newsroom with donations. He graduated in 2017 from the University of Oregon with a journalism degree, worked at the Spokesman-Review in Spokane as a Crime and Public Safety reporter before joining The Columbian in 2019 as an Assistant Metro Editor. He formerly wrote about business, and economics in Clark County.

What is AI?

Generative Artificial Intelligence (AI) is a system with access to online, public or private information that can be used for detailed humanlike responses to users' requests for that information. In 2022, a noticeable evolution in artificial intelligence came with the release of the free online software ChatGPT in November. It allowed the average user to ask the AI to search for, write and edit words, data and graphics with a high degree of preferred styles. Many similar AI to ChatGPT are available and will become available. The Columbian has reported on how AI affects businesses, education, law enforcement, including many scams created with AI.

What's next for AI

With decades of experience in AI, a Meta Senior Engineer talks about what's next

by WILL CAMPBELL

David Adkins
Sr. Engineering Manager,
Generative AI
Meta AI

I n David Adkins' four years at Meta, he remembers a moment of AI experimentation with a last-minute idea.

Last year was the first year that Meta put a word limit on employees' performance reviews. David had written a 1,200-word review, but it needed to be half that length. He pasted his writing into an internal chatbot and told the AI system to make his performance review 600 words but not lose any context. Then he submitted it.

"It was a random thing I decided to do at the last minute," he said. "I saved 2 to 3 hours of work because I thought to do this."

Using AI to turn notes and copy into more narrative and flowing pieces of writing is probably the most underrated use of current AI tools for the everyday user, he said. The possibilities for AI in the near future are wonderful but also require a high degree of responsibility to use and not harm others or our sense of truth.

"AI affects every industry, and we can't avoid it," he said. "The early adopters and innovators move faster ahead."

In sales, every vendor is talking about how it has AI built into its platform. They're also using it to generate leads. The legal, financial and investing industries have all started to experiment with it, too.

There's one major thing for small businesses to note with AI's current progression: It takes a full-time, in-house machine-learning expert and maybe a data scientist also to be able to do anything with AI that's groundbreaking for your company, he said. That includes taking large data sets and using AI to analyze them and make predictions, such as when a piece of hardware is likely to fail.

But tools that allow a non-expert user to manipulate and use AI to interact with a massive amount of private data are in the near future.

Soon, average users will be able to:

• Creating a persona on a website or in an actual store that can interact with customers.

• Generate quality audio and video

• Adopt other languages

New tools, including Meta's Llama 2 (llama.meta.com/), are working to make complex AI tasks more accessible.

How can we get in trouble with it?

The idea that AI systems should be able to access online information under copyright protection is definitely an area that is going to be tested.

Content publishers, including the New York Times, are taking ChatGPT and other AI systems to court in an effort to prevent their content from being read and reworked with AI. But who's to blame in a case of plagiarism: The user of AI, or the company that created the AI? Either the courts or the companies will come to a settlement.

"This is a natural progression of things," Adkins said. "We've seen this in past industries, including the creation of unions because Ford revolutionized the assembly line."

Other troublesome gray areas with AI include discrimination of systems. An AI tool wouldn't want to reflect human biases or discrimination for harming people or minority groups. For example, if AI were to use data on housing to help creditors decide to select, it wouldn't want to assume correlations between gender and likeliness for a successful loan, skewing success more towards one gender.

Deep-fake images are hyper-realistic computer-generated images that AI can create and users can fool or manipulate people with. One example that made a splash online recently was a fake AI image of the Pope in a puffy-fashion Balenciaga jacket.

A more harmful example of that AI technology might be a generated audio clip of a presidential candidate's voice that someone uses in a robocall telling people not to vote, Adkins said. For now, the ability to do such complex AI manipulation only lies in the hands of companies with large funding, which puts the onus on them to flag creative content, he said.

AI from a local software firm

The demand for AI work and integration is increasing along with the speed of innovation

Dave Barcos
Director of Business Development at Formos & Founder of North Bank Innovations

by **DAVE BARCOS**

The last year has seen staggering advancements in AI. Something akin to the acceleration of an F/A-18 Hornet being launched off an aircraft carrier. It has transformed the way we think about almost every business and individual involved. Since its inception in 2015 OpenAI has become the fastest growing product of all time with the majority of that growth happening since late October of 2022. While ChatGPT is the most recognizable name for most. The list of competitors and products is growing daily and Generative AI is being woven into the fabric of most every application we are using. Companies like Google, Anthropic, Meta, X and many more are developing competitive technology using the core components of Transformers, Large, Language models and Neural Networks. These are the new components in the architecture of Generative AI.

Because of the speed of which these models appeared there is no real industry or sector that owns the expertise. Everyone is scrambling to learn how these models work, how best to apply them, and what value they can build with them.

I work for Formos, a global custom software development firm based here in Vancouver. Formos has been inundated with requests in the last year for implementation of AI. Many of our current clients have asked us to implement ChatGPT and other models into their current applications. We have also had requests from dozens of new clients that want to harness the AI in a new application Formos has built solutions for our existing clients in business sectors such as healthcare, travel, housing, food and beverage and marketing. These solutions each leverage connections to these powerful models in ways that would not have been possible even two years ago.

A common mistake many people make in using AI is using the "Search Engine Paradigm." This paradigm means we ask questions and expect responses in the same way we interact with a search engine. This is severely limiting and causes most people to get frustrated with the AI engine they use.

Imagine instead of question and response that we have been limited to; we now have unlimited access to the thinking of the whole of humanity. You wouldn't ask a single question; you would engage in a conversation. Your learning would come more slowly as you continued to absorb responses and ask new questions to expand your knowledge.

Dave Barcos is Director of Business Development at Formos, a custom software development firm with over 130 developers globally. His clients include ZoomInfo, JH Kelly, RealWear, Toolbelt, KinectAir, Perfect Company and more.
Dave has also served as an advisor for the Portland & SW WA startup community. He is the founder of North Bank Innovations, a local non-profit organization dedicated to building entrepreneurial resources in Southwest Washington. Today North Bank Innovations hosts Vantechy a networking group with 2,000 members.

AI: The new, the bad and the good

AI to help "long-term outcomes on new job opportunities and quality of life"

Krystal Daibes Higgins
CFA, Ferguson Wellman Capital Management

by **KRYSTAL DAIBES HIGGINS**

Welcome to the brave new world of generative artificial intelligence (GAI). Love it, hate it, the latest evolution of artificial intelligence (AI) is here to stay. GAI is expected to drive seismic, fundamental changes in consumer behavior and business operations. More effective medical treatments, educational access, more strategic military decision-making -- the positive effects of increased productivity and better decisions by consumers, businesses and world leaders are enormous.

(R)evolutionary

In a nutshell, AI is a technological application that can mimic human behavior. GAI is the latest evolution of AI, most recognized through Microsoft-backed ChatGPT and Google's Bard. The latest version of GAI exploded when tools emerged that could produce human-like responses to seemingly any question. While not always accurate, the responses are written in sophisticated language. The accessibility of GAI resulted in ChatGPT reaching one million users in just five days. Compare that with Instagram at 2.5 months, Facebook at 10 months, and Netflix at 3.5 years.

GAI can also produce graphics, images and audio. For example, GammaAI is a website that can build a full presentation in under 30 seconds with a few key words. Durable is a service that builds a website from scratch.

Technology Fears

There is a lot to celebrate with GAI – and there is an equal amount of fear. History shows us the backlash to most new technologies. Remember the mainstream introduction of television in the early 20th century, or more recently the internet in the 1990s. Not surprisingly, there is a healthy and valid skepticism around AI. Our society will have to navigate possible negative aspects including copyright infringements, deepfakes, amplified biases and privacy law violations. Governments have the arduous task of regulating AI in a way that encourages innovation, yet also mitigates negative consequences.

Ironically, we can use the good AI to combat the bad AI. For example, it can be a tool to identify individuals using it for nefarious or illegal reasons. Importantly, AI capabilities are also being developed by governments overseas. Businesses and governments that don't use AI will be left behind, with potentially detrimental outcomes.

Opportunities

The good news is past technological advancements did not take over humanity nor displace workers, but rather improved productivity, giving rise to new industries and employment growth. We believe GAI will have similar long-term outcomes on new job opportunities and quality of life. It will likely disrupt the labor market initially, but it could potentially drive one of the most sustained economic growth periods of our time. GAI is already expected to create one million new jobs in the healthcare industry1 and enhance machine learning, engineering and data analytics. Bottom line, AI and GAI are powerful tools to improve work and lives in countless ways. It is important to be aware of the risks, but remember that it is a tool, and like any tool, it can be used for good and evil. We can either fear AI and let it control us, or we can embrace AI and use it to make improvements in ways we have yet to fully understand.

Krystal Daibes Higgins, CFA, joined Ferguson Wellman in 2021 and is vice president of equity research, serving as an analyst and member of the firm's investment team. She supports the investment team researching technology sector activity, and performs research related to Global Sustainable Investing strategy. Prior to joining Ferguson Wellman, Krystal was an analyst for Mazama Capital Management in Portland, and portfolio specialist and communications analyst for Sands Capital Management in the Washington, D.C., area. Krystal earned her B.S. in marketing and business management from Oregon Institute of Technology and her M.B.A. from the University of Oregon.

AI in banking

"AI is helping banks move quickly to develop tools and products"

Dan Cox
Acting President/CEO
& Chief Operating Officer
Riverview Bank

by DAN COX

I remember the first time I realized that my smart phone wasn't just a device to make a call, text and send email. I was suspicious after I realized that I had talked with a friend about something and then saw an ad on my phone featuring the same product. I remember wondering if it was a coincidence. Then it happened again and again. We're assured they are not listening, but we all know now that it didn't happen randomly. What we were seeing is some of the first recognizable forms of AI. While this is irritating, it has become a common occurrence.

I'm not the expert for AI at Riverview. AI is the process of machines making decisions similar to humans and other living beings. My original understanding of AI was really called something else. Algorithms and data gathered from our website was the beginning. Everyone wants to understand return on investment (ROI) and being able to forecast outcomes, especially for marketing and sales. We want to know where people are coming from, where they are going on platforms, how long are they there, and what they are searching for, to better recommend products and services that fit their preferences. Businesses collect this data to share with AI in an effort provide a more efficient and customized experience. However, many of us dislike businesses collecting the data. It's a quandary.

Additionally, AI is helping financial institutions better understand clients which means better service and an upgraded client experience. The world is moving quickly, and people want speed and performance. AI is helping banks move quickly to develop tools and products to do that.

With time and data, AI can respond at a high rate of speed that outpaces humans. However, there's something missing in communication when AI is used. It sounds more mechanical because it is. The emotional feeling isn't there and you can hear it if you're looking for it. We are celebrating all that is possible with AI and what it is bringing to our personal and business lives. While I see the benefits of AI in our business, I continue to believe in the power of the human spirit and don't believe that AI will replace authentic, genuine interactions with people. I will continue to believe in the 250 employees at Riverview and look to AI to help them provide better products, services and overall banking experience to our clients.

The Impact of Artificial Intelligence on ports:

A Perspective from Mike Bomar, Director of Economic Development at Port of Vancouver USA

Mike Bomar
Director of Economic Development
Port of Vancouver USA

by MIKE BOMAR

Artificial Intelligence (AI) has become a buzzword across industries, promising to revolutionize how businesses operate. In the realm of ports, AI is poised to bring significant changes, enhancing efficiency, safety, and sustainability. As the Director of Economic Development at Port of Vancouver USA, I don't see AI changing the quantity or nature of jobs at our port – yet I believe it has the potential to profoundly influence how we allocate our time and resources.

One of the most tangible impacts of AI at ports is in predictive maintenance. By analyzing vast amounts of data from sensors and equipment, AI can predict when machinery or infrastructure is likely to fail, allowing for proactive maintenance to prevent costly downtime. This function has the potential to not only save time and money, but also improve safety by identifying potential hazards before they escalate.

Another area where AI can make a difference is in optimizing logistics and supply chain management. AI algorithms can analyze complex shipping patterns, weather forecasts and other variables to recommend the most efficient routes and schedules. While many of those factors are controlled by shippers and other non-port entities, optimizations can produce far-reaching benefits for all involved. For example, reduced fuel consumption, lower emissions, and faster turnaround times have obvious benefits for ports, their stakeholders and the community as a whole.

In terms of security, AI-powered surveillance systems have the potential to enhance port safety by detecting unusual activities or potential threats. These systems can analyze video feeds in real-time, serving as another set of eyes to assist security personnel. This proactive approach reduces the risk of dangerous incidents and enhances the security of people and property throughout the port.

No matter the advancement in AI technology, people will remain at the center of the Port of Vancouver USA. We'll continue to rely on our dedicated workforce and highly skilled labor partners to keep maritime commerce moving and businesses thriving. But I predict that it will transform how we allocate our time. With AI helping synthesize infinite pieces of information to help make informed decisions, workers can dedicate more time

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Port of Vancouver USA

Port of Vancouver USA plays a key role in our local and regional economy. By making targeted investments in our facilities we attract jobs and economic development opportunities.

The port's marine and industrial activities support nearly 20,000 jobs and provide $2.9 billion in economic benefits to the region. The positive impacts of these benefits ripple throughout Southwest Washington.

Find out why your business should land at the Port of Vancouver.

Contact Mike Schiller or **Chrissy Lyons** at **360-693-3611** or **visit portvanusa.com**

Generative AI in healthcare

by MICHAEL GEIST, MD

Michael Geist, MD
Internal Medicine
Physician and Associate
CMIO Ambulatory,
PeaceHealth

Healthcare has traditionally lagged other industries in adopting innovative technology. This is due, in part, to risk aversion and the complexity of workflows that healthcare providers wrestle with while managing competing demands for quality, access, cost, safety, regulatory compliance and more. It has been said that "healthcare is more complex than rocket science."

To accomplish these aims, healthcare organizations use vast amounts of data from diverse sources. The need to do a better job of managing that data led to more than 96 percent of hospitals and 80 percent of office-based physicians adopting Electronic Health Records (EHRs) within the past decade.

While EHRs have produced significant benefits, including reduction in medical errors and improvements in quality reporting, there is more work needed to realize their full promise. And, there is an urgent need to address the epidemic physician burnout levels EHRs have facilitated.

With the IT infrastructure now in place, and a healthcare industry that is not meeting expectations, AI is poised to cause significant disruption. Current ChatGPT hype aside, generative AI has immediate, practical applications that bridge the gaps between reality and the promise of improved healthcare.

For patients, there are AI-based applications to help analyze and interpret medical data that empower them to take their own steps toward health improvement. AI can also help translate information into a preferred language, or to just make sense of insurance plan benefits.

AI solutions are also now available to address workload burdens on physicians who currently spend significant time after hours and on weekends documenting their work. These virtual scribes create notes in real time by listening to the conversation between the patient and their doctor. The notes are of high quality, better reflect the voice of the patient and are immediately available at the end of the appointment.

The exploding volume of in-basket messages is another source of stress on physicians, and slow response times is a major dissatisfier for patients. AI is being implemented to speed up the routing and response to messages, reducing the workload on physicians while delivering faster replies to patients.

AI solutions will improve the searching and summarizing of both patient medical records and the medical literature. They will not only save time but also producing deeper, more thorough review of the information and identify findings in sources such as scanned documents and images that likely would not be discovered by a human with ordinary search tools.

Building on all this, software vendors are testing virtual assistant features that listen to the conversation between the patient and physician, pend orders, pull up information and eventually make suggestions. This creates a hands-free EHR

AI: the biggest disrupter

Helen Devery
Senior Vice President
WSP

by HELEN DEVERY

As WSP urban planners, engineers and scientists, we are working to improve transportation and infrastructure, property and buildings, water, energy, and the environment in the communities where we live and work, focusing on solving problems using our training, background and real-world expertise.

We are currently working on over 20 planning, environmental and engineering projects in Clark County. They range from major bridge and road replacement projects, to comprehensive plan updates for cities throughout the county to industrial, engineering and environmental projects at Ports on the Columbia River. WSP has 45 staff members based in Vancouver and 67,000 employees worldwide.

Since the 1950s, we have been using an evolving suite of digital data and computer models and systems that help us understand our world and support our clients in making decisions about how to invest in the urban environment and infrastructure.

We use digital replicas of complex transportation and land-use models to predict travel patterns, demand and capacity on our roads, bridges and public transportation systems; we use geographic information systems to capture and assess patterns and display spatial information about our environment; and we create digital twins—virtual replicas of assets like bridges—that help us to plan for functioning critical infrastructure.

Generative Artificial Intelligence (AI) and the exponential increase of big data and computing power is rapidly changing the way we use data and develop computer algorithms to understand and make decisions about our complex urban environment. AI is quickly becoming the biggest disrupter and it will change urban planning, engineering and our built environment dramatically now and in the upcoming years.

AI in Urban Planning

AI is being used to develop traffic management systems that assess immediate data and develop solutions, such as real-time adaptive signal controls. AI can monitor the actual condition of roads, bridges, water and sewer systems to prioritize safety and maintenance needs. Public and micro transportation systems are using AI to analyze ride sharing and routing to optimize urban mobility, as well as help predict and respond to disaster planning.

In the U.S., the Massachusetts Institute of Technology and Harvard University have developed an AI system that can predict urban decay in our cities nationwide.

At its best, AI can radically improve how we gather data, conduct quantitative analysis and identify best options to address the challenging problems of our time such as climate change, disaster risk and sustainability. However, we also need to ensure that the qualitative element of how we plan and invest in our communities remains a fundamental and equal part of the process.

How AI data and algorithms are developed, privacy of data, whether the models are fair and outcomes equitable, how communities fund the cost associated with using AI, and most importantly, how the community is engaged in a transparent planning and design processes, will be critical to successful implementation of AI in the urban planning environment.

Clark County Employment Forecast, 2024

by SCOTT BAILEY

Scott Bailey
Regional Economist

First, looking back at 2023, Clark County's labor market again had a positive year. The unemployment rate averaged 4.2 percent, a half point below 2022 and the lowest annual average since 1999. Preliminary estimates indicate the county averaged 187,400 jobs over the year, a very solid 3.6 percent increase over the previous year. Industries like construction, healthcare and professional services—such as accounting, computer systems design and management consulting services—were adding staff. Manufacturing employment was on the plus side, but just barely. The one negative: In the first two quarters of the year (the latest data available), the average wage was not keeping up with inflation.

Back to the positive side: taxable sales in the lodging industry had a sharp gain over the year, bringing revenue back to where it was pre-COVID. The county has added some new hotels during the past year, so individual establishments may still not have totally recovered. Restaurant sales were up as well, and were well above pre-pandemic levels. Sales at retail outlets were a mixed bag. While below their peak in 2021 (when spending was boosted by COVID support programs), they were still well above 2019 levels.

Preliminary data show that the number of permits for housing units were down by 17% compared with 2022. Most of the decline was in multi-family housing. Single-family units, which fell sharply in 2022 with rising interest rates, had a smaller drop in 2023.

What's on tap for 2024? In case you haven't noticed, economists are terrible at forecasting, so you should take what follows with a big grain of salt. I was not one of those who predicted a recession last year, and I expect to the national economy to continue to expand in 2024. I think economist Claudia Sahm has done the best job of analyzing the economy this past year. Her biggest worry: the Federal Reserve Bank will leave interest rates too high for too long.

As long as the national economy continues its moderate growth, Clark County should also continue to have low unemployment and robust job growth. It appears, at least nationally, that wages have been rising faster than inflation, so that bodes well for households here. Whether we see lower-paid job holders closing the wage gap, as happened earlier in the COVID recovery, remains to be seen.

Adkins

"There's still an unclear definition of what responsibility means with AI that blows his mind," he said. "It's very stressful. Everyone who works in this field wants to do good."

David Adkins is a Senior Engineering Leader at Meta working in the Responsible AI space and has been working in the areas of Transparency, Fairness and Safety of AI systems for the last 4 years working across different Meta products. Prior to joining Meta, David was the Vice President of Technology at the Buffalo News, driving the digital transformation of the news business and pioneering paywall technology, ad technology, and open source content management systems. David has over 20 years of experience managing technology teams across industries from technology and media, to real estate and international multi-current payment processing. He holds a Master's degree in Computer Science focused on Machine Learning from the University at Buffalo.

Bomar

to strategic planning, customer relations, and innovation, ultimately enhancing the port's competitiveness and sustainability.

In conclusion, AI holds great promise for ports. The potential for this powerful tool to influence how we work and the tasks we prioritize is undeniable. Embracing AI technologies strategically and thoughtfully will be crucial for ports like ours to stay ahead in an increasingly digital and competitive landscape.

Generated with the Assistance of ChatGPT

Geist

experience where the focus is back on the patient, while helping the provider to not miss anything.

AI is improving safety by making predictive models and alerts more accurate and actionable. Examples include early detection in the deterioration of a patient's condition, enabling faster intervention and better outcomes.

AI has also played a major role in disease outbreaks, including COVID. Using a combination of real-time internet search and purchased data, along with communicable disease reporting, a tool called HealthMap detected early signs of outbreak, predicted spikes in specific areas and identified new trends/strains. This has aided response planning and managing resources.

There are risks to AI. But too much focus in the media is on sensational topics like "hallucinations" and the "coming singularity that will wipe out mankind." The real risks of AI are already here and are human in nature. They include the perpetuation of bias, worsening of inequality and the dissemination of misinformation. Fortunately, these risks are addressable with policies and strategies already emerging to manage them.

Dr. Euan Ashley, a professor of AI, Genomics and Cardiology at Stanford has said, "AI is going to restore the humanity to the practice of medicine." As a practicing physician, I embrace his prediction that these tools will allow us to refocus our attention back on the patient, and deliver better, more personalized care. In 20 years we will look back at this era in medicine and lump it with the practices of ancient medicine. We will wonder how we ever managed.

Michael Geist, MD
Internal Medicine Physician and Associate CMIO Ambulatory, PeaceHealth

Devery

Virtual Cities

One city that is at the forefront of using AI to shape a resilient, sustainable and smart city is Singapore. This small but densely populated city/state has developed "Virtual Singapore" — a 3D digital replica of the city built on topographic and real-time data.

Virtual Singapore is being used by the community and its urban planners to integrate previously separate data sets, develop alternative design scenario analyses and shape policy and decision-making for urban planning and infrastructure. For example, as Singapore plans for a new high-speed rail connection to Malaysia, the model can be used to assess detailed and evolving routes, stations and associated urban development alternatives. Using a real-time dynamic data network of sensors located throughout Singapore, air quality, temperature and noise data can be used to simulate urban pollution and help guide immediate options to reduce it.

According to the World Bank, approximately 4.4 billion people live in cities that are facing increasingly complex social, environmental, economic and political systems with evolving challenges to address resiliency, natural disasters, climate change, mobility, housing and affordability. How can we optimize the future of our built environments, determine which infrastructure investments we should make and when, and use AI to help us optimize our investments in resilient and sustainable communities? There are communities throughout the world that are beginning to use AI to make planning decisions to answer these questions.

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