

Two travelers in the winter sky

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Every December, children look to the sky and imagine Santa's sleigh streaking across the cold night, guided by a red-nosed reindeer and a bag full of surprises. But up beyond the clouds, beyond even the reach of Santa's fanciful route, there's another traveler of the night: a shape made not of magic, but of dust and darkness in the quiet march of cosmic time.

We call her the "Walking Girl Nebula." She lies some 1,200 light-years away in the constellation Cepheus, a dark river of interstellar dust drifting slowly through space. In long-exposure photographs, she appears as a shadowy silhouette, a girl mid-stride, as if tiptoeing across space.



Carlos Rotellar

She is a dark nebula, meaning it does not emit or reflect light, it blocks the light from the stars behind it. It is composed of cold gas (mostly hydrogen) and interstellar dust grains that absorb visible starlight. She is a star forming region where new stars and planetary systems can begin to form. It was discovered by Edward Emerson Barnard in 1919.

On Christmas Eve when you take the children outside to spread reindeer food, take a moment to look up. Somewhere out there, Santa is making his rounds — and just beyond; the Walking Girl is gliding through the stars, keeping him company in the silence of space.

Merry Christmas!
— Dr. Carlos Rotellar is a Bowling Green nephrologist who has had an interest in astrophotography and has been taking images of the universe from his driveway for several years. Website: Skyastrophotos.com.



CARLOS ROTELLAR

The Walking Girl Nebula lies some 1,200 light-years away in the constellation Cepheus

AI-assisted shopping is the talk of the holiday shopping season

By ANNE D'INNOCENZIO
AP Retail Writer

NEW YORK — Major retail chains and tech companies are offering new or updated artificial intelligence tools in time for the holiday shopping season, hoping to give consumers an easier gift-buying experience and themselves an augmented share of online spending.

Although AI-powered purchases are in early stages, the shopping assistants and agents rolled out by the likes of Walmart, Amazon and Google can do more than the chatbots of holidays past. The latest versions were designed to provide personalized product recommendations, track prices and to place some orders through unscripted "conversations" with customers.

Those features are on top of shopping updates from AI platforms like OpenAI's ChatGPT and Google Gemini. In one of the season's most talked-about launches, Google this month introduced an AI agent that can be instructed to call local stores to ask if a desired product is in stock.

San Francisco software company Salesforce estimated that AI would influence \$73 billion, or 22%, of all global sales in one way or another from the Tuesday before Thanksgiving through Monday after the holiday, according to Caila Schwartz, Salesforce's director of consumer insights.

The figure, which stood at \$60 billion a year ago, encompasses everything from a ChatGPT query to AI-supplied gift suggestions on a retailer's website, Schwartz said.

Despite the advancements, AI's impact on holiday shopping will be "relatively limited" this year since not every shopping site has useful tools and not every shopper is willing to try them, said Brad Jashinsky, a senior retail industry analyst at information technology research and consulting firm Gartner.

"The more retailers that launch these tools, the better they get, and the more that consumers get comfortable and start to seek them out,"



PETER MORGAN / AP

Amazon's generative AI-powered shopping assistant, Rufus, appears on a computer monitor, Dec. 1, 2024, in New York.

Jashinsky said. "But customer behavior takes a long time to change."

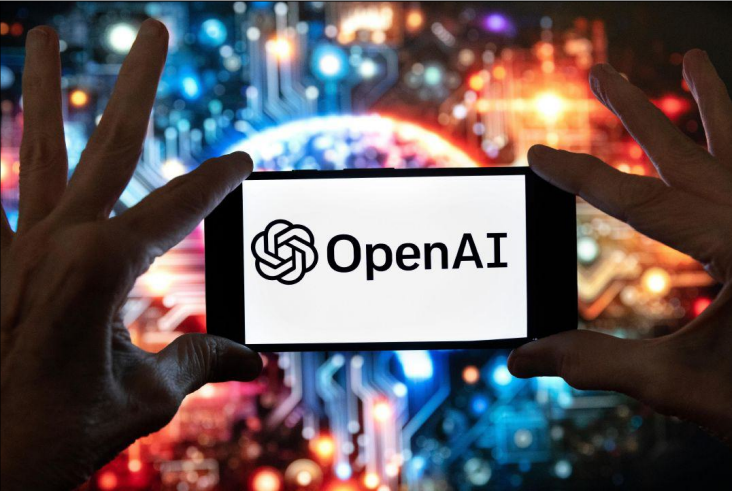
Here are three ways the technology is poised to influence holiday shopping habits in 2025:

Bypassing the search bar
AI's potential to simplify the search for the perfect present is most apparent so far in tools that promise to give shoppers faster and more detailed results than a web browser with a lot fewer clicks.

OpenAI upgraded ChatGPT with a shopping research feature that provides personalized buyers' guides. The information comes from product pages, reviews, prices and a user's previous interactions with the chatbot. The tool works best for complicated products like electronics and appliances, or for "detail-heavy" items like beauty or sporting goods, OpenAI said.

Then there's Rufus, the shopping assistant that Amazon rolled out last year. It now remembers information customers previously fed it, like having four children that all like board games, for example. A user's browsing and purchase history and reviews are used to personalize recommendations.

Google upgraded its AI Mode search tool to provide answers



MICHAEL DWYER / AP

The OpenAI logo is seen displayed on a cell phone in front of an image on a computer screen generated by ChatGPT's Dall-E text-to-image model in 2023 in Boston.

to detailed questions composed in natural language. For example, users can tell the agent they want to buy a casual sweater to wear with skirt or jeans in New York in January that goes with a skirt or jeans, Responses are pulled from Google's 50 billion product listings. The tool can also produce charts with side-by-side comparisons of prices, features, reviews and other factors. Previously, shoppers had to use keywords, filters and product links to find the information they needed.

"This is an expansionary moment, I think, for all of technology and for commerce," Lilian Rincon, vice president of

product, consumer shopping at Google, recently told The Associated Press.

Meanwhile, Walmart's AI shopping assistant, Sparky, offers occasion-based recommendations and synthesizes reviews. An AI-powered gift finder on Target's app exclusively for the holidays responds to prompts such as the age and special hobbies of the recipient.

New pricing tools and alerts
Tools for tracking online prices have been around for years, including CamelCamel-Camel, a third-party service for Amazon prices, as well as Paypal's Honey browser

See AI C3

The Christmas tree lot

We arrived at the Christmas tree lot after dark. My wife and I walked the long aisles of pinery, scrutinizing each tree as though it were asking for our kid's hand in marriage.

Most trees were standing erect, like soldiers undergoing inspection. Others were slumping like they were tired of playing the game.

I noticed a large family also looking at trees. They were in our aisle. Their oldest son was extremely tall. Very skinny. But very young. Maybe 15 years old, towering over all other customers by at least a foot. He had the face of an infant.

I had seen this family in the parking lot earlier. They had arrived in a rusted economy vehicle. Their clothes looked worn. And even though it was 30-odd degrees outside, some of the kids were wearing Dollar General-style flip flops.

"Which tree do we want?" the boy's mom asked her children.

The tall boy's brothers and sisters meandered from tree to tree, thoughtfully remarking on each one, as though the trees were people.

"Oh, this one looks so happy!" said one.

"No, I like this one!" said the boy's kid sister as she shook the tree's hand.

Meanwhile, the tall young man was staring at a lone tree. It was small, and seemed as though it had undergone a lifetime of malnourishment. The branches were skimpy, the trunk was not true, the top leader was crooked.

"I like this one," the tall boy said.

"THAT one?" exclaimed Mom. "It's puny."

But it was too late. The boy had evidently already bonded with the tree.

"We are NOT getting that tree," said Mom. "Are you out of your mind? I'm not wasting our money on that one."



Sean Dietrich

See TREE C3