

What Zillow's failed algorithm means for the future of data science

 fortune.com/education/business/articles/2022/02/01/what-zillows-failed-algorithm-means-for-the-future-of-data-science

BY **E She a** February 01, 2022, 11:19 AM

The Zillow website on a mobile phone arranged in Hastings on Hudson, N.Y., as seen in November 2021. (Photographer: Tiffany Hagler-Geard—Bloomberg/Getty Images)

Zillow's [homebuying service](#), Zillow Offers, seemed like a great idea when it was introduced in 2019. Sellers had it easy: forget prepping the house or real estate agents. Just answer some questions online, snap and upload a few photos, and wait for the offer.

Advertisement

Harvard Business Analytics Program

Big-data analysis told Zillow what to offer and how much to charge on the flip. Easy peasy. Except, come 2021, the wheels came off. Zillow had bought thousands of houses, and the algorithms didn't factor in repairs with the skyrocketing costs of materials and labor.

"We've determined the unpredictability in forecasting home prices far exceeds what we anticipated, and continuing to scale Zillow Offers would result in too much earnings and balance sheet volatility," Zillow Group cofounder and CEO Rich Barton said in the company's [fiscal third-quarter earnings release](#). Zillow didn't respond to a request for an interview, and the exact details of what happened haven't publicly surfaced, but the company ended Offers and cut one-quarter of employees.

Big data has become a magical talisman in business. But as with Zillow, many

Data caressed by artificial intelligence tools are the rage in business because executives are supposed to get insights and connections they wouldn't otherwise—for good reasons. "Data is the currency for digital transformation," says Sheila Jordan, chief digital technology officer for [Honeywell](#). "Data is a thread to create this experience."

"There is a reason why governments and intelligence firms are bullish on big data," adds Lian Jye Su, a principal analyst at [ABI Research](#). "There's not enough human intelligence to go around. It's not cheap to hire the people. And we're swamped with data."

But many projects like Zillow Offers go terribly wrong, and experts estimate failure rates that vary from 60% to 85%.

"Everything starts with a problem you're trying to solve," says Sandeep Kharidhi, general manager of data and analytics platforms and chief product officer at payments and business technology company [Deluxe](#). Or it should. Unfortunately, keeping your eye on the tech can miss what's important.

"An IT-driven approach often leads to technical solutions looking for problems...rather than focusing on what is most important to the business," says Stephen Brobst, chief technical officer at [Teradata](#). One example? A client company that was hot to have A.I. handle inbound customer calls. It worked, except that only human conversations turned into additional sales. Bots dutifully didn't try.

"We see the challenges not in the size of the data sets themselves, but the variety," says Paul Fahey, head of investment data science, asset servicing for [Northern Trust](#). "It's about the size of the data, the complexity, the variety of data, and it being in multiple places."

Need the right learning

One place the situation can change is in classrooms.

"Most of the people who are dealing with data did not have any formal education in it, and if they did, they only had a piece," says Peter Aiken, associate professor of information systems at the [Virginia Commonwealth University's School of Business](#).

The lack of understanding only magnifies an inherent problem in the complexities of [data analysis](#).

"Data models, especi/