the softer side of data science

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Narrator

Petroleum data scientist Nathan Vrubel doesn't usually analyze words at Chevron. He's helping bring Big Data to the oil field – like using remote monitoring tools on subsea manifolds for incident detection or interrogating fiber optic lines to spot changes in oil and gas flow rates. But when his Houston-based colleagues and friends struggled after Hurricane Harvey for basic necessities, he started thinking about words.

After the hurricane, the company triggered human resources protocols to help the workforce. It donated to relief groups. And a few communications people partnered with IT to set up a website … to help affected employees connect with each other directly. People could post about what they needed – like temporary housing or help with repair work. Others could post about what they had to offer. And as the message board started filling up, Vrubel began to count words.

What started as tallies from spreadsheets morphed into word clouds. These visualizations are images made up of words on a subject, used to provide quick insight on textual data. The size and color of each word indicates its frequency or importance in the text. From the message board, Vrubel could tell that housing was the biggest need after a crisis like Hurricane Harvey – and it happened to be the thing most people had to offer. He built word clouds like this one to highlight what people were talking about on the site. Larger, blue font shows urgent items. His work revealed how the team could make future message boards better … to show more clearly the needs versus the haves. And to focus on housing.

No one likes to anticipate a crisis… but this petroleum data scientist hopes his work can help people get a roof over their heads quicker should they need it in the future.