



bpx Drilling Report Summary Auto Generator

Company background

bpx energy — bp's US onshore oil and gas business — is headquartered in Denver and, from there, manages world-class assets that span Texas and Louisiana. bpx is making a significant step for the company's aims to reduce emissions and enhance production while improving reliability of bpx's assets. bpx has a large scale development program that is focused on drilling, completing, and producing wells efficiently and in an environmentally conscious way.

Project Description

The goal of this project is to create a generative AI model that consumes Electronic Drilling Records (EDR) data and populates a Daily Operations Drilling Report's 24-Hour Summary section. The solution devised here would automate the analysis/documentation engineers must do manually every morning. EDR data is digital sensor data that includes the activities of drilling, casing, cementing, etc. This project would convert thousands of sensor data points into a human readable summary on the previous days activity.

An example 24-Hour Summary for one of bpx's wells is shown below:

"Ran in hole with ____ casing from ____' to ____'. Landed mandrel in wellhead. Broke circulation through float equipment. Laid down landing joint. Picked up and installed packoff and offline cement equipment and tested same. Nd bop stack and prepared to skid to _____. Circulated _____x casing cap. Pumped _____bbl spacer. Pumped _____bbls lead. Pumped _____bbls tail. Displaced with _____bbls cut brine. Plug bumped on time. Bled back _____bbls. Floats held. All spacer plus _____bbls cement back to surface. Wellhead valves shut. Well secured."

Desired Skillset

Knowledge of databases, NLP, and AI/ML

Preferred Team Size

We expect this work to be more suited to a team of 3 students, up to a maximum of 5.

Internship Possibilities

Upon completion of the field session, bpx is open to discuss internship opportunities.

Location

Students will work at CSM campus or their agreed location and meet with their BPX contact on a bi-weekly basis in person or via teleconferencing.

Resources

bpx can provide AWS cloud resources in support of the project.

Contact

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