NDSU | COMPUTER SCIENCE

Capstone 2025

# Intelligent Data Extraction from Inverter Spec Sheets

Team Members: Lyle Pedlar, Conor Quinn, Ethan Jablon, Chance Bowlinger

Sponsor: Ulteig

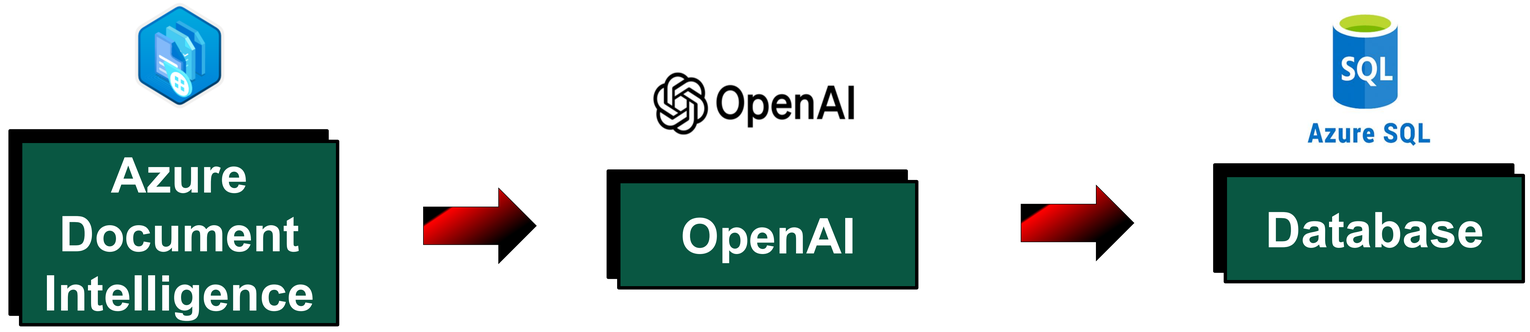
Ulteig

## Business Need

**Ulteig engineers' time is being wasted searching for various component spec sheets. These files may have varying naming schemes and layouts for each vendor.**

**Ulteig wanted a solution that could intake files with various layouts, extract the important data, and compile it into a central database for engineers to easily search. This would make information readily accessible and reliable, increasing the productivity of the engineers.**

## *DATA EXTRACTION*

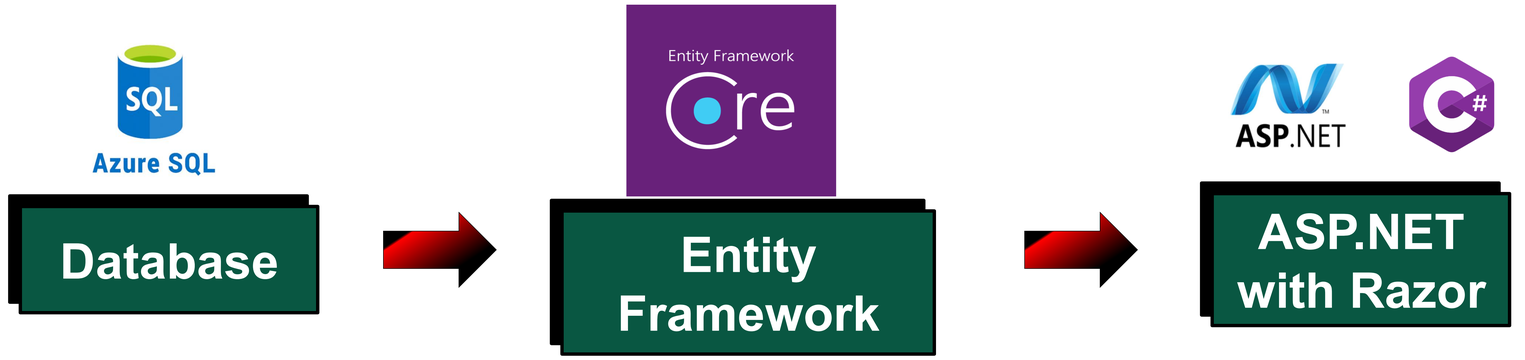



**A spec sheet PDF is passed to Document Intelligence, which returns a comprehensive JSON object describing the form.**

**The JSON is passed to an OpenAI model with a prompt to extract the most important fields.**

**The extracted fields are then added to the database record for storage and later retrieval.**

## *PRESENTATION AND USER INTERFACE*




**Data fields and an Azure Blob storage link are retrieved from the database.**

**Entity Framework Core maps all database records into interactable objects.**

**A front end with Razor pages dynamically displays relevant, filterable information.**