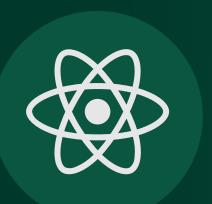
NDSU COMPUTER SCIENCE

LEVERAGING TECHNOLOGY TO EMPOWER **STAKEHOLDER COMMUNICATION**

The Field Research Submission Tool (FRST) is a web application designed to open communication between researchers, agronomists, and the NDSU AG Data team to communicate about variety trials

MODERN TOOLS

The use of modern tools helps a larger number of developers to expand on the project



React

A modern framework for building powerful web applications



NodeJS

Backend system that uses web language to build fast and efficient applications



Microsoft SQL Server A robust database for storing and managing large amounts of data.



Azure Devops

Tools from Microsoft that hels teams plan, build, and deploy software in the cloud.

Field Research Submission Tool Seth Arvila, Anthony DeFoe, Nathan Hanson, Josh Heeren, Gavin Kestner

STATEWIDE

Serving 8 Research Extension Centers (RECs) across North Dakota, the Field Research Submission Tool will have an impact across the state

PROJECT SPONSORS

KEY GOALS

AUTHENTICATION

Allow users to securely sign in without needing to create an account

E DATA UPLOAD

Upload data into the system to create a better experience for power users

PDESIGN

Modern and adaptable design that will allow for future improvements and features

\$= INVOICING

Groundwork for invoicing and billing features

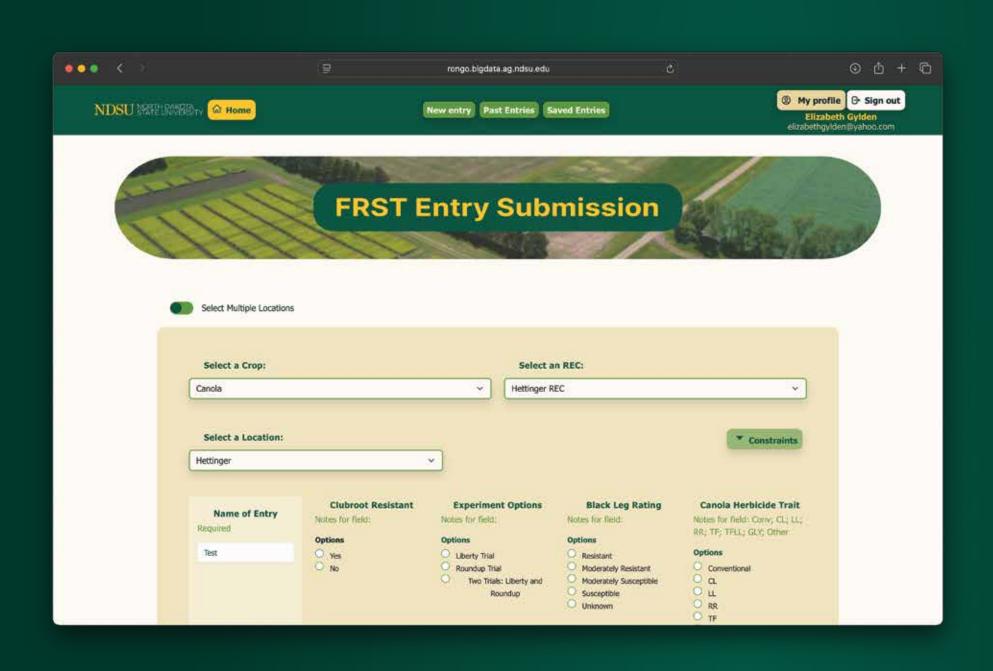
EFFICIENT CODE

Through the use of modern software engineering practices, the capstone team was able to update the existing codebase to make it easier to understand, be more adaptable, and to use fewer lines of code. These practices will reduce technical debt and make the project more maintainable

Microsoft × Discultural Data Analytics

ADAPTABLE DESIGN

The tool has been designed to be adapted and reused across different projects in the family



AFTER

Support for multiple entries, entry duplication, and bulk submissions



BEFORE Single Entry Input

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