

LEVERAGING TECHNOLOGY TO EMPOWER STAKEHOLDER COMMUNICATION

The Field Research Submission Tool (FRST) is a web application that changes the way that researchers, agronomists, and the NDSU Ag Data team communicate. The tool will transition their existing workflow of sticky notes and emails into a single modern web application that allows all of the stakeholders to be informed and have clear communication about research trials

STATEWIDE IMPACT

Serving **8** Research Extension Centers across North Dakota, the application will have an impact statewide

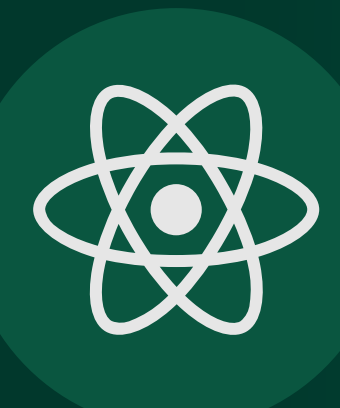
250 Industry Representatives
24,000 Producers

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

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

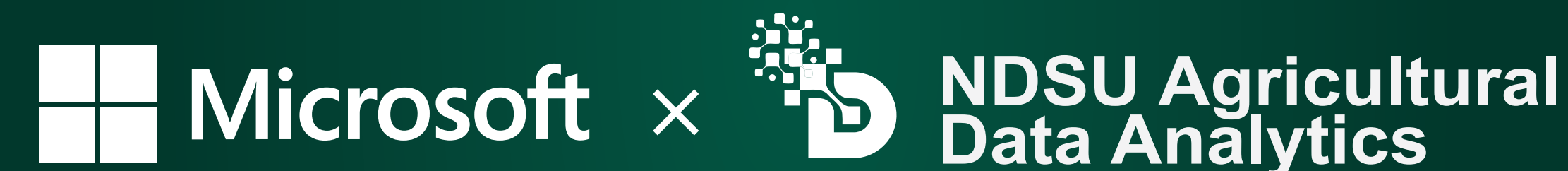
A robust database for storing and managing large amounts of data



Azure DevOps

Tools from Microsoft that helps teams plan, build, and deploy software in the

PROJECT SPONSORS



KEY GOALS

AUTHENTICATION

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

DATA UPLOAD

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

DESIGN

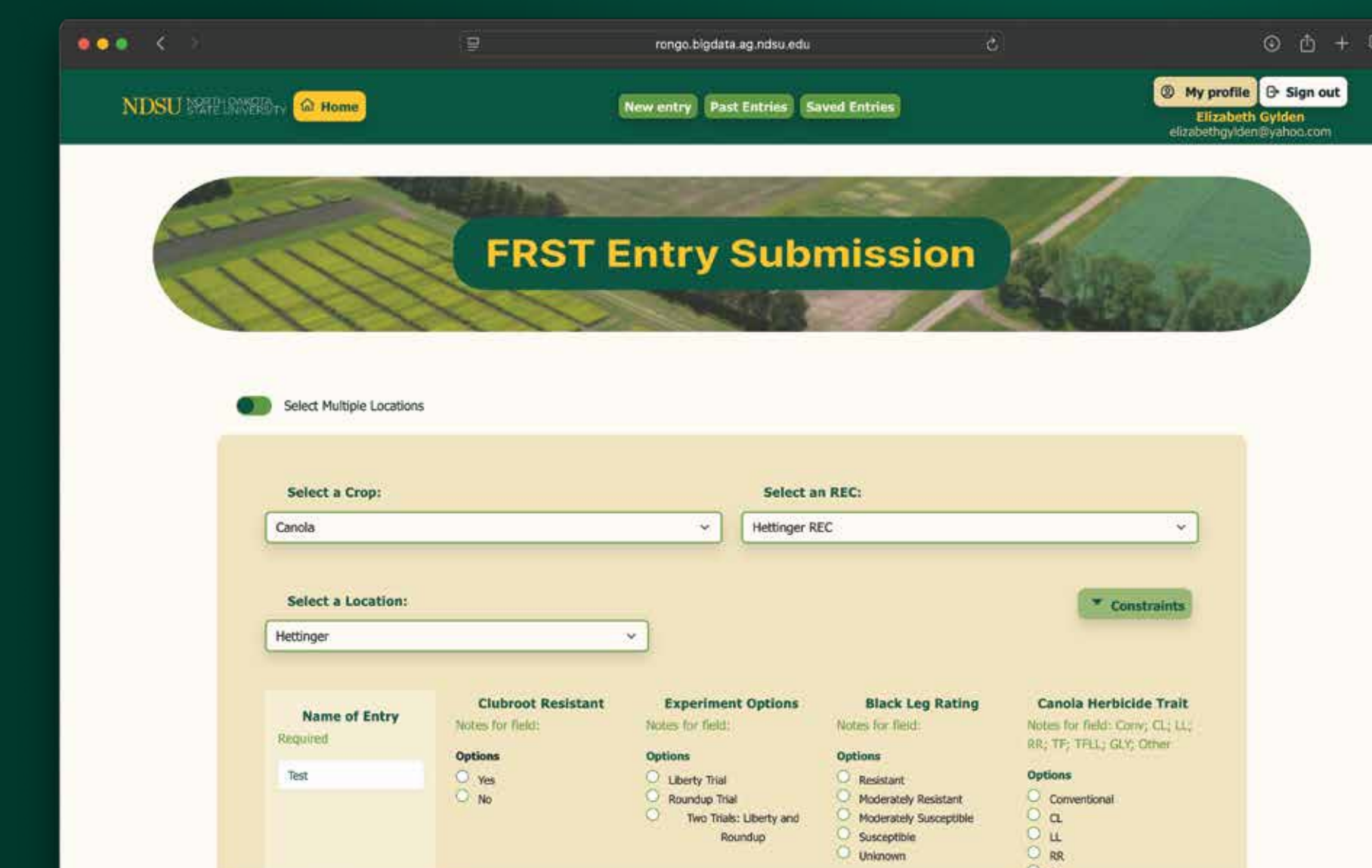
Modern and adaptable design that will allow for future improvements and features

INVOICING

Groundwork for invoicing and billing features

ADAPTABLE DESIGN

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



BEFORE
Single Entry Input

AFTER

Support for multiple entries, entry duplication, and bulk submissions

