Field Research Submission Tool

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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
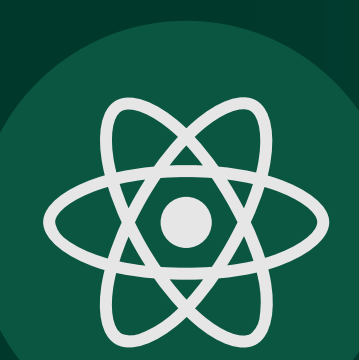
STATEWIDE IMPACT

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

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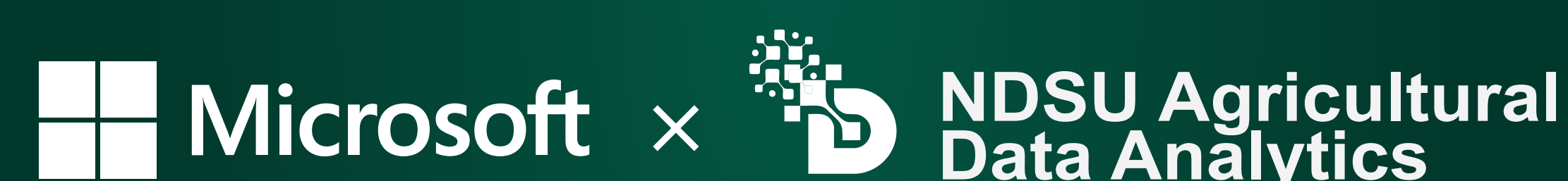
Microsoft SQL Server
A robust database for storing and managing large amounts of data.

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

PROJECT SPONSORS

Microsoft × NDSU Agricultural Data Analytics

KEY GOALS

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

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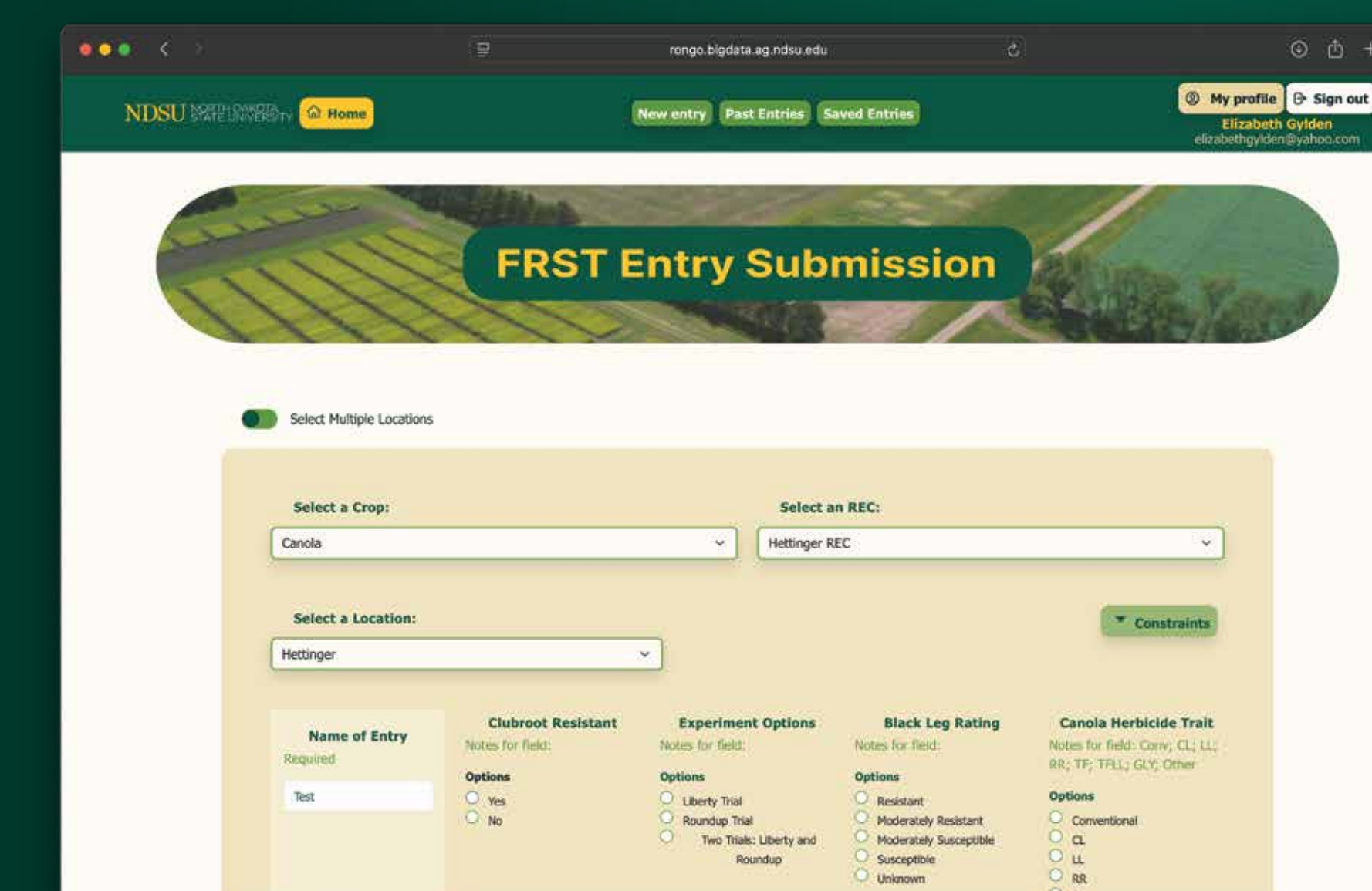Upload data into the system to create a better experience for power users

🖌 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