# MINOR IN AGRICULTURAL DATA SCIENCE

Students who complete the Agricultural Data Science Minor will learn to use some of the same data science and analytical skills as in the Data Science programs. However, their focus will be on implementation of these tools to identify important correlations and trends and to implement practical improvements and agricultural decisions that benefit food security and safety, as well as human and ecosystem well-being. They will gain practical experience through an internship where they will analyze and report on real-world data for a client. They will serve as a necessary bridge between agronomists, animal scientists, or agricultural economists and data scientists who design analytical tools. The primary needs for agricultural data science include improved crop management, risk assessment, animal health, soil health, resource optimization and environmental protection, supply chain management, predictive analytics, and unlocking the potential of urban farming. Agricultural data analysis is also required to mitigate the impact of global climate change, to improve ecosystem resiliency and climate change adaptation, and to maintain food safety and security.

## Learning Objectives

Upon successful completion of this minor, students will be able to:

1. Describe tools and define vocabulary, and concepts for data analysis in agricultural systems to compare outcomes and solve problems related to decisions on agricultural production.
2. Describe how agricultural data are collected in labs, fields, production fields, and from consumers. Know how to design experiments, sampling protocols, and determine data types and formats to be used.
3. Identify tools, techniques, methods, computational platforms and resources for specific data and projects.
4. Interpret reports, charts, figures, maps, statistical tables to comprehend agricultural information.
5. Identify the issues, implications, and needs of data collection, use, and storage in agriculture.