PROJECT CHARTER

Project Name	Intelligrain
Date Produced	10/10/2023
Project Goals	Create a solution for farmers to gain a better understanding of their crops through real-time visuals and analytics
Project Objectives	This project will consist of an application that displays a map containing overlays representing the quality of grain in real-time during harvest.
Project Budget	No funds available
Project Sponsor	Ground Truth Agriculture
Project Manager	Dillan Zurowski & Brandon Hillbom - Software Developers

Additional Key Project Stakeholders

Farmers - Northstar customer/primary user

Ground Truth Agriculture - Secondary customer/owner of the project (Their primary customer is Farmers)

Tim Maciag/Trevor Douglas - Project advisors

Overall Project Milestones

See Milestone-Based Schedule Document

Overall Project Risks

- Project duration
- Licensing costs/limitation for third party APIs
- Lots of data with potentially low bandwidth to get it: performance must be of high consideration
- Data quality/accuracy: Accuracy of the data from the ML computer vision and infrared spectrometer along with the coordinates taken at the time of sampling is crucial. We must consider where the Jetson Nano device is placed on the combine and how big the combine is to make more exact approximations.
- Failed user acceptance testing where farmers don't want to use another app on top of other apps. It may not provide enough value.
- Integration challenges: We will be unable to test the app in its truest form (during harvest), so we will need to simulate the environment. We will also face potential challenges relating to seamless data transmission.
- Potential compatibility issues (Android and IOS)
- Scalability is essential (performance with large amounts of data).

- Historical Data Analysis: Implementing advanced features like historical data analysis and path planning based on past grades may require complex algorithms and could pose challenges in terms of development and accuracy.