| **PROJECT REQUIREMENTS DOCUMENT** | |
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| **Project Name** | Intelligrain |
| **Functional Requirements** | |
| [This section should list the functional requirements for the project, including any features or properties of the project’s outcomes.]   * Must allow the user to login (already have account info) * Combine app:   + Must display combine progress/quality in real time on a map   + Must only be able to see data from it’s combine * Parent app:   + Must display the finalized map of all combines with data points blended into a gradient for clearer understanding of the information.   + Must be able to filter map data based on grade/grain characteristic * Upload data from Jetson Nano microcomputer to the on-combine tablet to the Cloud. * Must have the ability to export the current filtered map as jpg or pdf. | |
| **Technical/Performance Requirements** | |
| [This section should list the technical requirements for the project (e.g., the required technology infrastructure) and any performance requirements (e.g., the minimum response time).]   * Must use Flutter front end, Java Spring Boot backend, Google Firebase, and Google Cloud Platform * Must integrate with mapping software (minimal costs or FOSS) * Must use Github and git for version control * App must handle concurrent users and high data loads during peak usage times (harvest) * Must comply with Ag data transparency regulations * App must have a low latency response time, especially when displaying real-time grading data * App must be able to work in an offline mode, allowing users to view previously downloaded data and maps without an internet connection | |

Dillan:

* Security: Implement robust data encryption and secure transmission protocols to protect user and grading data?
* Must be able to export data? to excel/other. Front end, ask farmers if this is something they need.
* why does one combine have to be able to only see their map? why not have an option to select a particular combine to see what it has done
  + do we need to have time logs associated witht the progress?
  + combine should visually see where the other combines are in the map?