

Software Requirements Specification for SFWRENG 4G06: subtitle describing software

Team 28, Cowvolution Minds

Aryan Patel

Harshpreet Chinjer

Krish Patel

Martin Ivanov

Shazim Rahman

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Revision History

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

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16 Cultural Requirements

16.1 Cultural Requirements

- The primary language for the product will be English, tailored specifically to Canadian dairy farmers.
- All data and measurements will follow Canadian standards, including the use of liters for milk production, kilograms for weight, and hectares for land area. Other relevant units such as Celsius for temperature and metric tons for larger quantities may also be used.

17 Compliance Requirements

17.1 Legal Requirements

- The project must comply with the [Code of Practice for the Care and Handling of Dairy Cattle](#), which is a government-regulated standard in Canada. This code outlines mandatory guidelines for the ethical treatment, health, and welfare of dairy cattle. Any management recommendations or actions suggested by the machine learning model will align with these regulations to ensure ethical practices in dairy farming.
- The project must comply with [PIPEDA](#) (Personal Information Protection and Electronic Documents Act) for any personal information related to dairy farmers or other individuals involved. This includes

the handling of contact details, financial information, and other personally identifiable data.

17.2 Standards Compliance Requirements

Insert your content here.

18 Open Issues

Insert your content here.

19 Off-the-Shelf Solutions

19.1 Ready-Made Products

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20 New Problems

20.1 Effects on the Current Environment

- Introducing this system could change how farmers currently select sires or evaluate herd performance. Some may resist adopting new technology due to unfamiliarity.

20.2 Effects on the Installed Systems

- The project will be integrated into the existing Cattleytics software, which is already used to manage dairy farms. The machine learning tool will act as an additional module within Cattleytics, allowing farmers to visualize the family tree of cows and predict future traits based on genetic data. Seamless integration with the current system will be prioritized to ensure smooth adoption and ease of use.

20.3 Potential User Problems

- Users may face difficulties interpreting complex AI model outputs, so ensuring the tool's recommendations are easy to understand is key.

20.4 Limitations in the Anticipated Implementation Environment That May Inhibit the New Product

- The tool will need to function effectively on standard farm computing systems, which may have limited processing power or internet connectivity.

20.5 Follow-Up Problems

- Continuous updates may be needed to improve the model based on feedback from farmers. Future updates may also need to address changes in farming practices

21 Tasks

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Insert your content here.

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Appendix — Reflection

The information in this section will be used to evaluate the team members on the graduate attribute of Lifelong Learning. Please answer the following questions:

1. What knowledge and skills will the team collectively need to acquire to successfully complete this capstone project? Examples of possible knowledge to acquire include domain specific knowledge from the domain of your application, or software engineering knowledge, mechatronics knowledge or computer science knowledge. Skills may be related to technology, or writing, or presentation, or team management, etc. You should look to identify at least one item for each team member.
2. For each of the knowledge areas and skills identified in the previous question, what are at least two approaches to acquiring the knowledge or mastering the skill? Of the identified approaches, which will each team member pursue, and why did they make this choice?