WATER LEAK DETECTION

PARTNERS

FARMBOT MONITORING SOLUTIONS

Charles Sturt University

IN SHORT

This Food Agility CRC project addressed the challenge of identifying and mitigating water leaks within farm water infrastructure. Using Farmbot's water monitoring technology and machine learning models, the project successfully developed and validated a prototype solution capable of detecting leaks in the water infrastructure on Charles Sturt University's Glenesk farm.

"[This project developed] a true leak detection solution using machine learning algorithms. By utilising existing data, we can continue to improve Farmbot's ability to ensure peace of mind for Australian farmers."

Pascal Hendricks, Farmbot

THE CHALLENGE

On-farm water leaks are expensive, not solely due to the cost of the lost water but also the cost of finding the leak and repairing the damaged infrastructure. The under-development or loss of livestock, animals and cropping due to undetected leaks is another critical issue. Farmers typically don't have the means to detect leaks without being on-site and due to the large sizes of remote farms, it could be days, weeks or even months before a leak is detected.

OUR APPROACH

This project achieved its aim to develop a leak detection model and implement a prototype leak detection solution. The project surpassed its objective by detecting 100% of all leak events. Additionally, it showed significantly better performance in minor leak detection response time, with room for improvement in the performance of major leak detection. Overall, the project was successful in validating that a leak detection solution is feasible using existing technology and shows the strong potential for further utilising on farm data to develop solutions that improve the lives of Australian farmers.

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