

Predicting Fish Mortality

in Home Aquariums

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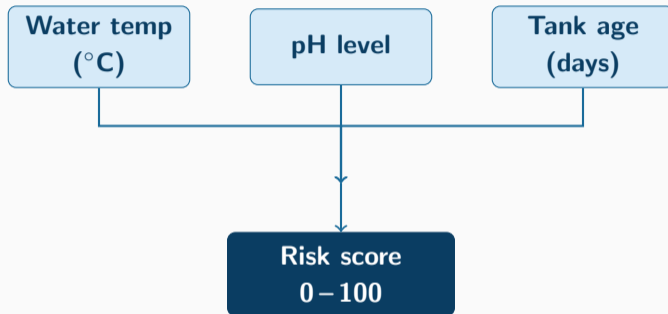
The Problem

34%

of new aquariums
experience a fish death
in month 1

- ! Customers blame the store
- ! Refund cost: ~\$40 per incident
- ! No early-warning system exists

Our Model

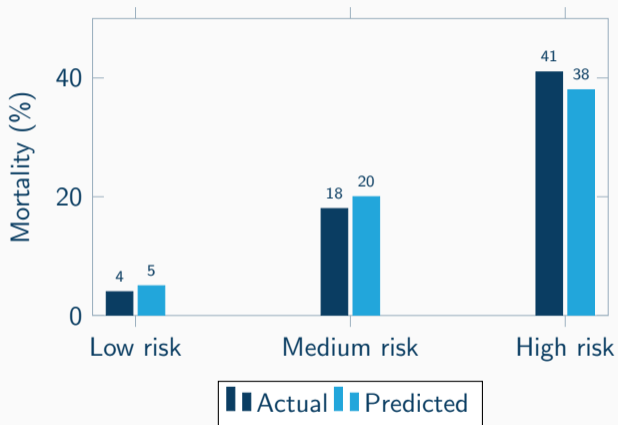


Logistic regression trained on 3 years of store data ($n = 1,240$ tanks).

How We Built It

- Collected water-quality logs from 1,240 customer tanks (2021–2024)
- Held out 20% of tanks as a test set before any modelling
- Fit a logistic regression on temperature, pH, and tank age
- Chose threshold score of 70 to trigger a staff follow-up call

Key Result



Model accuracy

91%

High-risk flag
reduced losses **28%**

Conclusions



Model works

91% accuracy on
held-out test data



Business impact

28% fewer refund
incidents in pilot



Next step

Deploy risk-score
alert in POS system

Thank you · Questions?