Rooster AI on Evaluating the Threat to Bird Species

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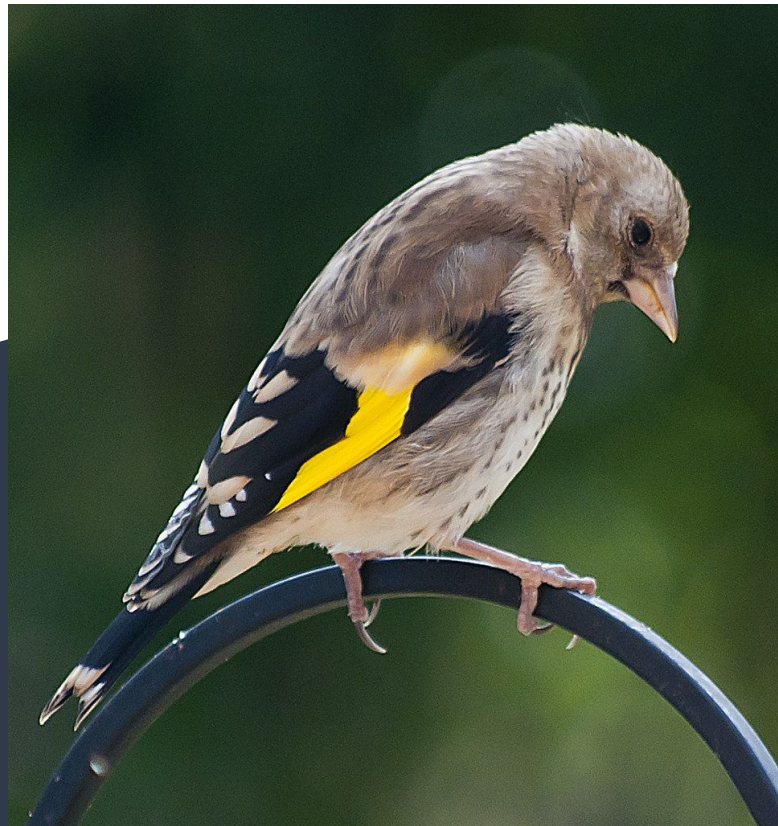
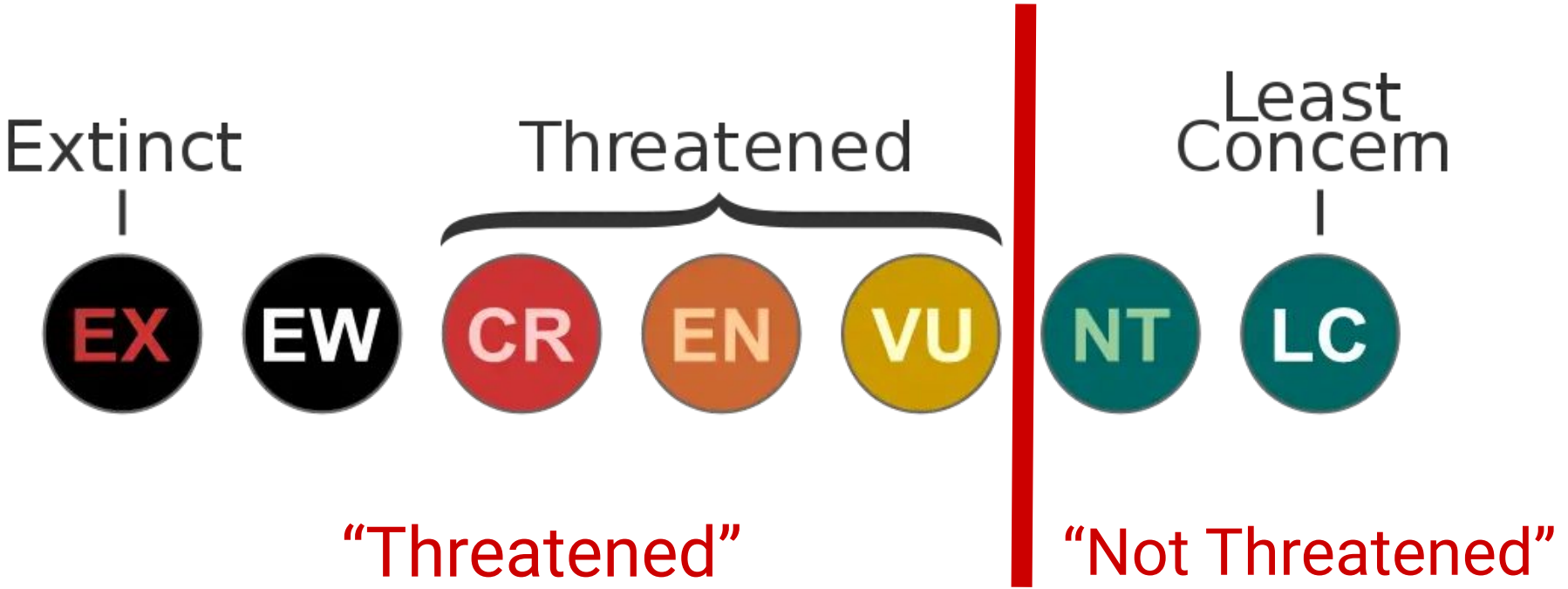


Overview

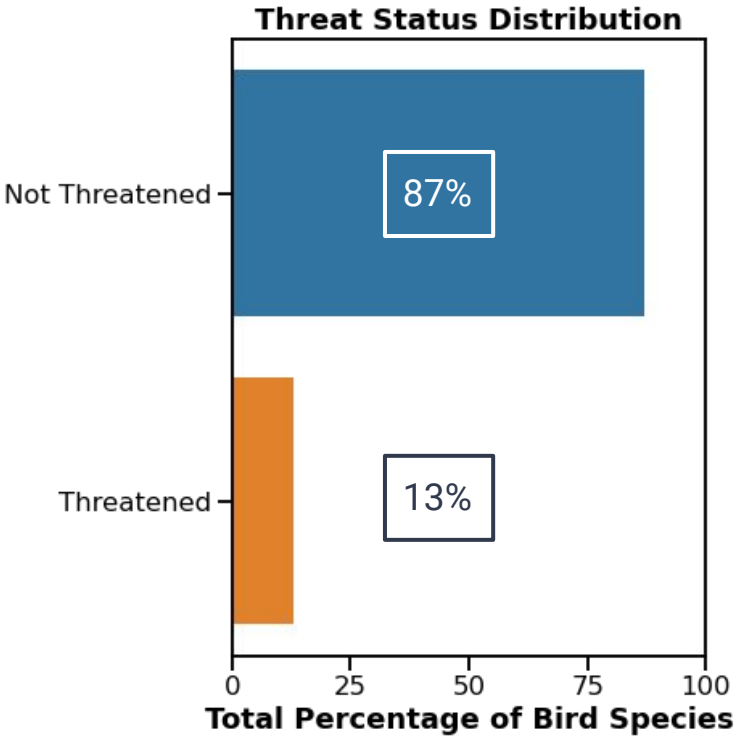
- Business Understanding
- Data Understanding
- Modeling and Evaluation
- Recommendations
- Next Steps

Business Understanding



Data Understanding

- Global Threatened Status
- Geographic, Habitat, Threats
- Dietary Information
- Imbalanced Data
- “Data Deficient” (DD) category



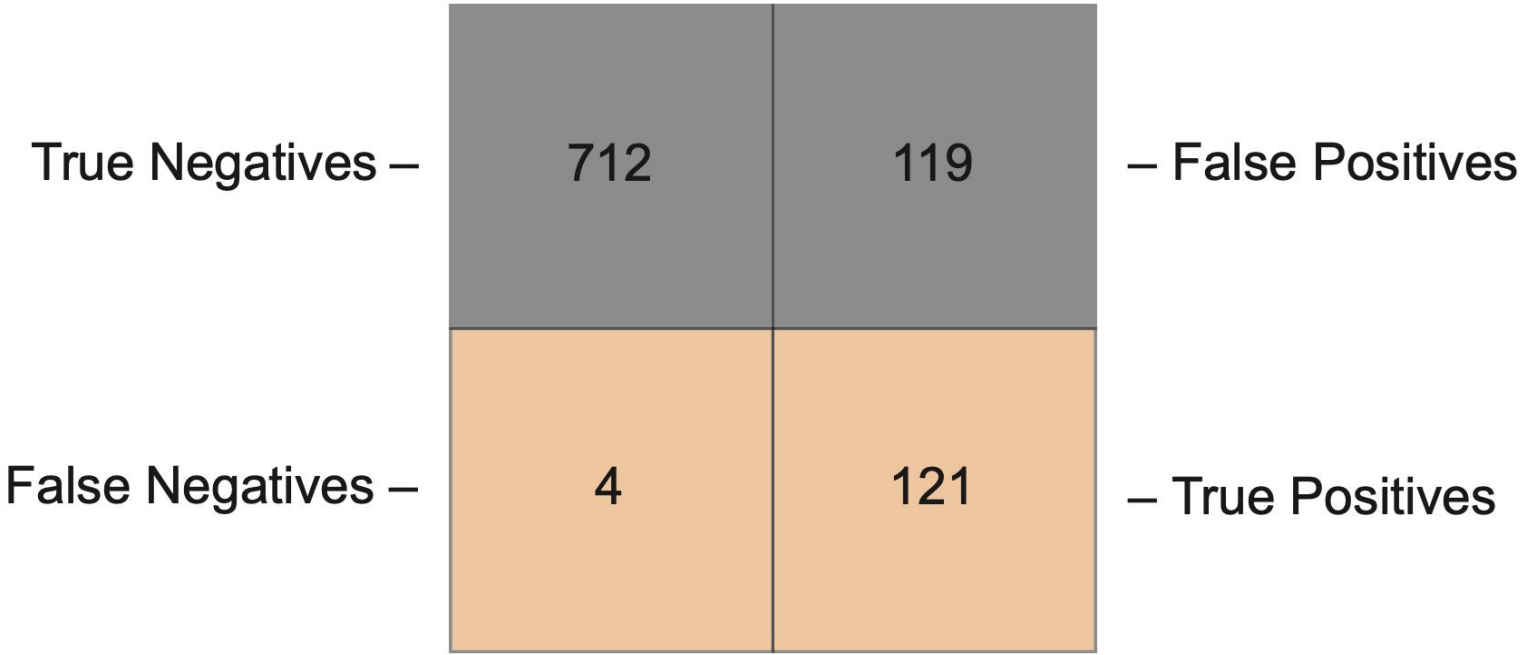
Modeling and Evaluation

- Final Model = Average of two models

True Negatives –	712	119	– False Positives
False Negatives –	4	121	– True Positives

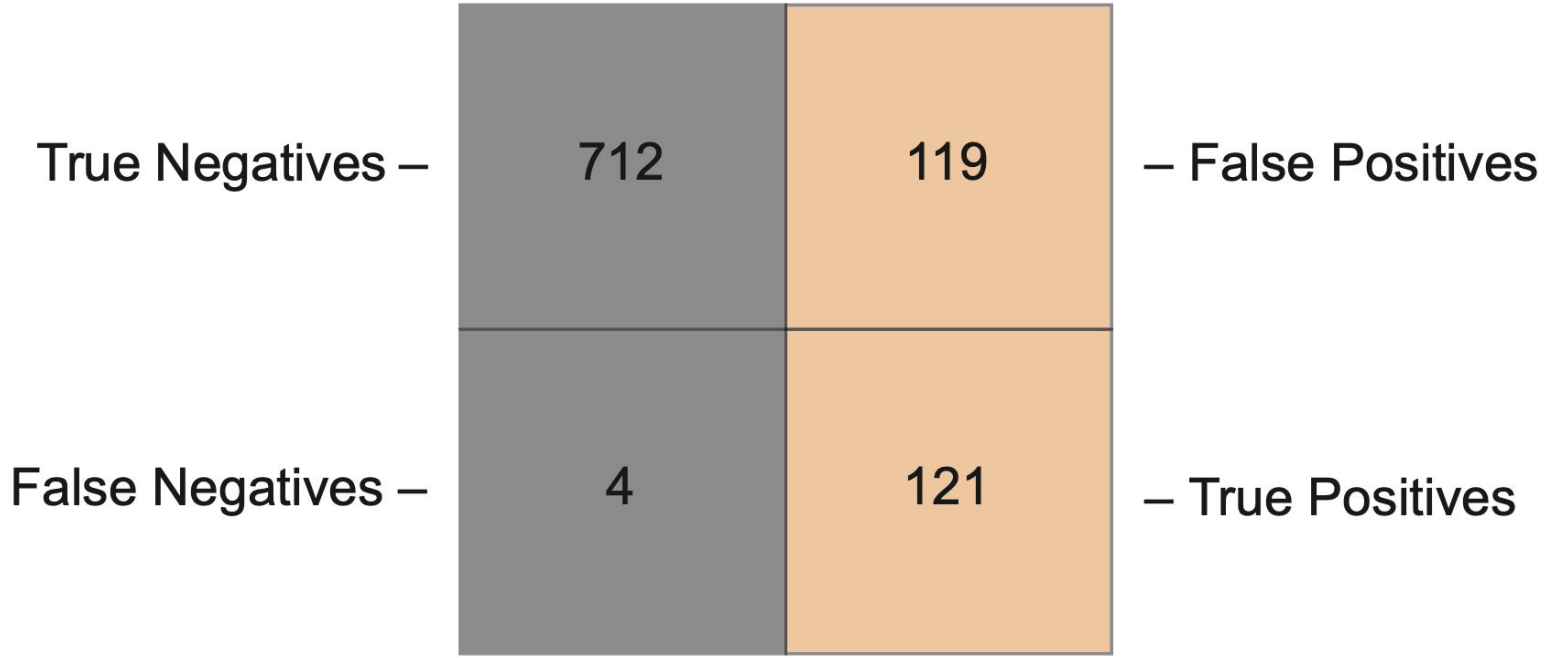
Modeling and Evaluation

- 97% Recall



Modeling and Evaluation

- 50% Precision



Modeling and Evaluation

- Feature Importance
  - Agricultural Threats

Modeling and Evaluation

- Feature Importance
  - Invasive Threats

Recommendations

- Species Prioritization
- DD Predictions
- Threat Types Focus

Next Steps

- Additional Data
  - Species Population
  - Geographic Range
  - Threat Types
- Time Series Analysis
  - Population trends over time
  - How geographic range changes over time

Thank You!

- https://github.com/andrewwhitman/BirdConservation