

EXOPLANET ANALYSIS REPORT

Target_2

Date: October 05, 2025

1. CLASSIFICATION RESULTS

Classification: CANDIDATE

Confidence: 65.5%

Probabilities:

CONFIRMED: 4.7%

CANDIDATE: 65.5%

FALSE POSITIVE: 29.8%

3. INPUT DATA

Transit Features: 53 parameters

Spectrum: Not provided

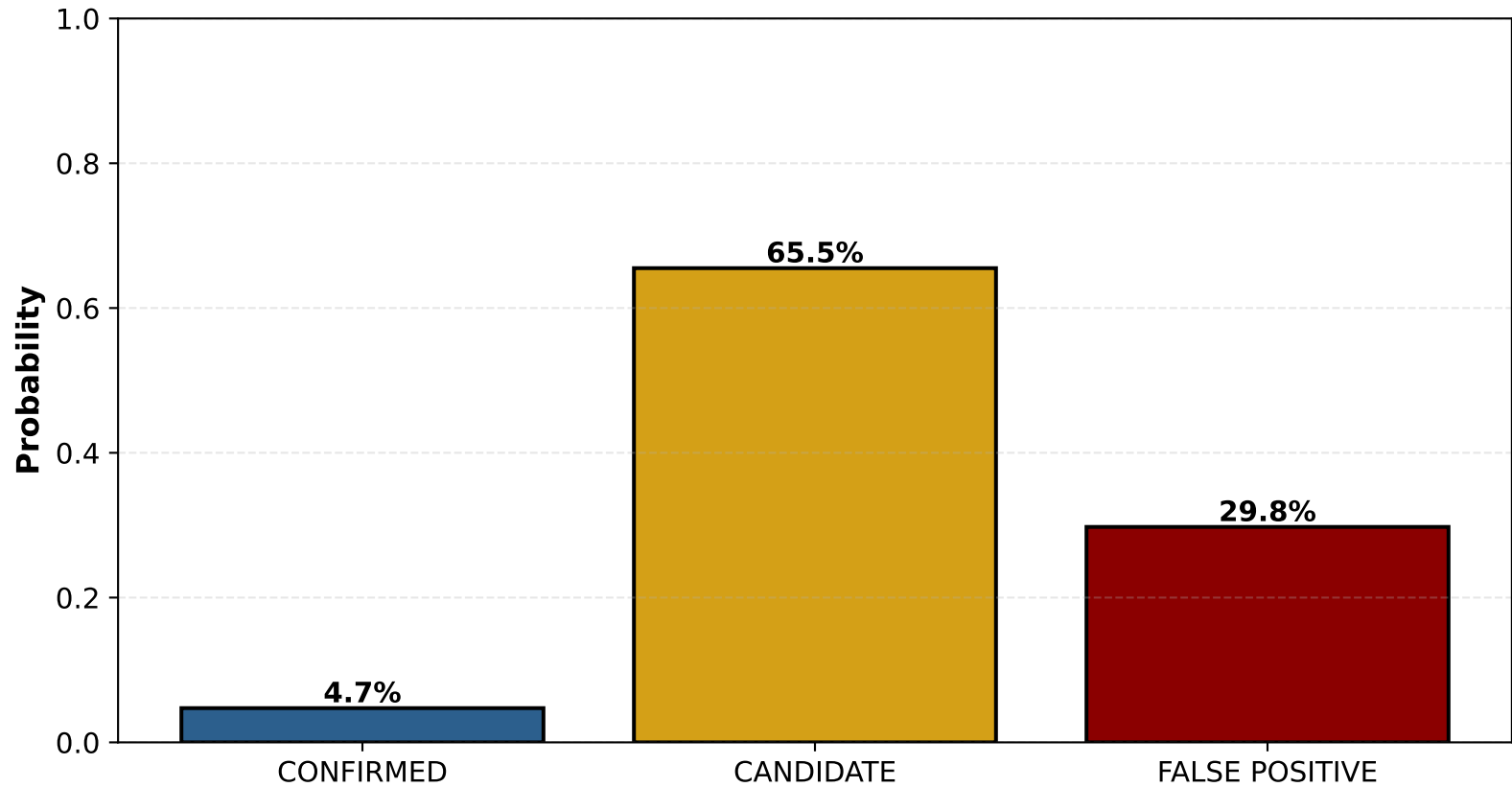
4. KEY FINDINGS

- Classified as CANDIDATE (65.5% confidence)

OBSERVER NOTES

Data Quality: 100.0% (53/53 features)

CLASSIFICATION ANALYSIS



INTERPRETATION:

Classification: CANDIDATE
Confidence: 65.5%

The transit classifier analyzed the light curve and determined this is most likely a CANDIDATE.

- Model Performance:
- Accuracy: 89.5% on 3,913 test samples
 - F1-Score: 88.9%
 - Training: 15,652 Kepler candidates

- Confidence Guide:
- >90%: High confidence, reliable result
 - 70-90%: Moderate, consider follow-up observations
 - <70%: Low confidence, uncertain classification

CANDIDATE: Strong transit signal (66%) from light curve analysis

DETAILS & RECOMMENDATIONS

MODEL INFORMATION

Transit Classifier:

Type: Stacking Ensemble (RF + XGBoost + LightGBM)

Accuracy: 89.5%

F1-Score: 88.9%

Training: 15,652 Kepler exoplanet candidates

RECOMMENDATIONS

- Additional transit observations recommended
- Spectroscopic confirmation needed
- Verify with independent photometric data
- Consider for follow-up target list