

# Sleep Apnea AHI Estimation Report

DISCLAIMER: This report is generated by an automated ML pipeline for research purposes only. Not a medical diagnosis.

## Record: a02

Recording Duration : 8.83 hours

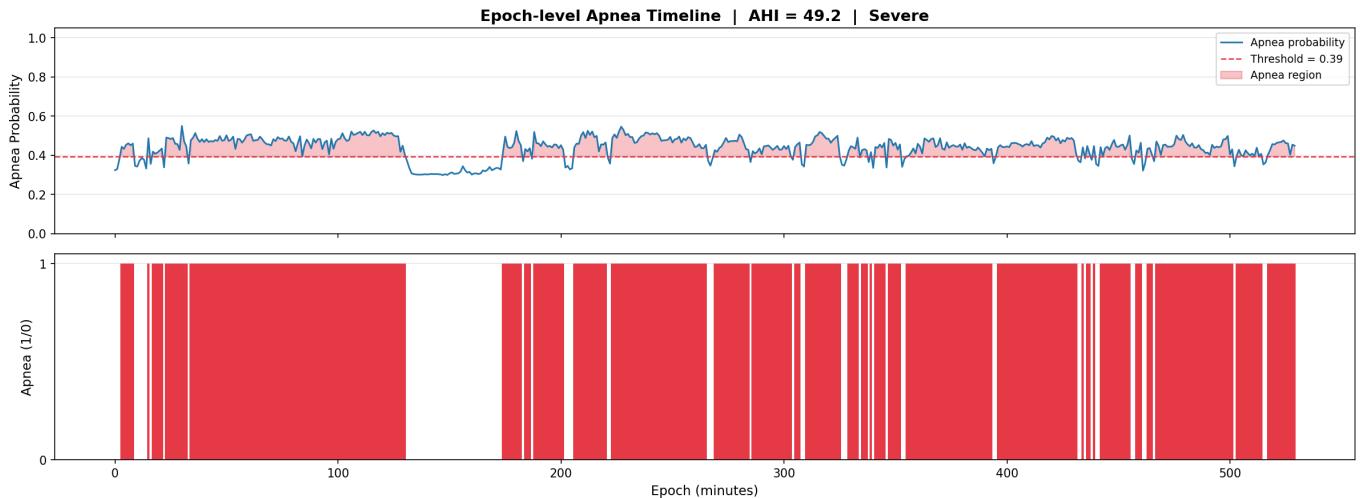
Apnea Epochs Detected: 435 / 530

**AHI = 49.2 | Severity: Severe**

## Model Performance (GroupKFold OOF - no data leakage)

ROC-AUC : 0.8105 | F1-Score : 0.7412 | Threshold : 0.3930

## Epoch-level Apnea Timeline



## AHI Severity Scale

< 5 : Normal | 5-15 : Mild | 15-30 : Moderate | >= 30 : Severe

Additional 300 DPI diagnostic plots saved alongside this report (HRV heatmap, box-plots, spectral & HR trends).

Generated by PulseForge | YUGUO Hackathon 2026 | SSN College of Engineering | Team PulseForge