Artificial Intelligence in Neat Products

Updated April 2025

Neat uses Artificial Intelligence (AI), specifically Machine Learning (ML), to enhance video and audio quality, automate camera adjustments, and provide insights into room usage. The ML processes deidentified video data (the presence of faces, bodies, and movement), audio data (voice activity and frequencies), and environmental data (occupancy, noise levels). It's crucial to understand that Neat prioritizes customer privacy, and the ML is designed to enhance the meeting experience without performing facial recognition for identification.

How Neat Uses ML in Its Devices

Neat devices primarily leverage ML for enhancing the meeting experience through computer vision and audio processing. Key applications include:

1. Neat Symmetry (Video Enhancement):
    a. Auto-framing: ML detects the presence of faces and bodies in the room and automatically adjusts the camera to frame participants optimally.
    b. People Tracking: ML tracks the presence of individuals as they move, keeping them in focus.
    c. Dynamic Composition: ML intelligently composes the video feed, highlighting active speakers and creating a balanced view.
2. Neat Audio Enhancement:
    a. Noise Suppression: ML filters out background noise (typing, HVAC, etc.) to enhance voice clarity.
    b. Echo Cancellation: ML identifies and removes echoes to prevent feedback and improve audio quality.
    c. Voice Enhancement: ML enhances voice clarity, making it easier to understand participants.
3. People Counting:
    a. ML-powered computer vision counts the number of people in the room. This data is used for space utilization analysis.

Data Captured and Processed by ML

Here's a detailed look at the data captured and processed by Neat's ML features:

1. Video Data:
    a. Facial Recognition (Limited): Neat devices detect faces for auto-framing and people tracking but do *not* perform facial recognition for identification purposes. The ML analyzes general facial features to determine location and movement, not to identify individuals.

    b. Body Detection: The ML detects the presence of human bodies to help with framing and tracking.
    c. Movement: The ML tracks movement within the room to keep participants in focus.
    d. Depth Information: Some Neat devices may use depth sensors to enhance people tracking and framing accuracy.
2. Audio Data:
    a. Voice Activity: The ML detects and analyzes voice activity (but not for the purpose of identifying an individual's voice) to enhance clarity and suppress noise.
    b. Audio Frequencies: The ML processes different audio frequencies to identify and filter out background noise and echoes.
    c. Sound Localization: The ML may use multiple microphones to localize sound sources for better audio processing.
3. Environmental Data:
    a. Room Occupancy: The ML counts the total number of people in the room, providing data on room occupancy.
    b. Ambient Noise Levels: The ML measures ambient noise levels to adjust noise suppression algorithms.

Important Considerations

- Privacy: Neat emphasizes privacy. Facial recognition for identification is *not* performed. The ML focuses on detecting presence, movement, and voice activity for enhancing the meeting experience.
- Local Processing: All ML processing of video and audio data occurs locally on the device. The data is not sent to the cloud nor stored on the devices or the cloud.
- Data for Analytics: Aggregated, anonymized data (e.g. room occupancy trends) may be used for analytics and insights to improve product functionality and help customers optimize space utilization. For example, this information can be found in the account administrator's Neat Pulse account. However, individual identifying information is not collected.
- User Control: End users have control over certain features, such as disabling the camera or adjusting audio settings.
- This document does not cover specific considerations or security measures implemented by individual application providers, such as Microsoft, Zoom, etc. Users are advised to consult the respective providers' official statements and documentation for detailed information on AI security concerns and related policies.

Neat References / Articles

Like Magic: How Neat's Engineers Use AI to Make Meeting Experiences Better

Neat Symmetry: Auto Framing - Neat Support