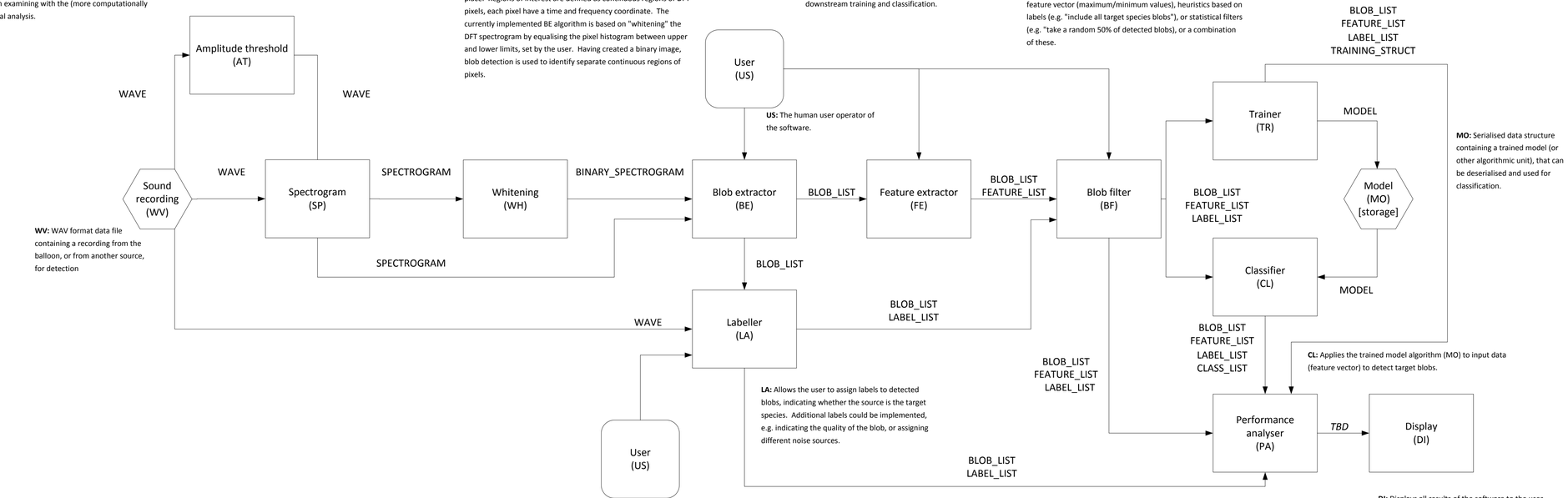
AT: Amplitude threshold identifies (quickly) parts of a large wave file that are worth examining with the (more computationally expensive) spectral analysis.

BE: The Blob extractor takes an audio recording (WV) and scans it for potentially interesting sounds. The analysis is typically performed on a discrete Fourier transform (DFT) of the recording, but other algorithms could in the future be implemented in this place. Regions of interest are defined as continuous regions of DFT pixels, each pixel have a time and frequency coordinate. The currently implemented BE algorithm is based on "whitening" the DFT spectrogram by equalising the pixel histogram between upper and lower limits, set by the user. Having created a binary image, blob detection is used to identify separate continuous regions of pixels.

FE: Measures a series of "interesting" metrics on the detected blobs. The metrics are hard coded into the FE, but the user can choose to use only a subset of those implemented metrics in the downstream training and classification.

BF: Selects a subset of detected blobs for further processing (training/classification). The nature of these filters is set by the user, and could include quantitative bounds applied to the feature vector (maximum/minimum values), heuristics based on labels (e.g. "include all target species blobs"), or statistical filters (e.g. "take a random 50% of detected blobs), or a combination of these.

TR: Trains a model (e.g. neural network, other machine learning algorithms) on a sample of labelled data, and saves the resulting network for future use with the Classifier.



arik.kershenbaum@gmail.com