

OBUS – Gestational Age Data

Overview

The gestational age (GA) model was trained and evaluated on the highly curated NEJM subset of the FAMILI2_enrolled dataset.

Label definition

The ground truth labels for the gestational age were calculated as described in [1.1 Gestational Age Overview].

The sweep tags of videos in the NEJM subset were provided in the dataset. These were precisely reported for videos collected with GE and Sonosite transducers, as well as the novice Butterfly videos. The sweep tags of the expert Butterfly videos were reported as assumed blind sweeps (the tag ASSBS).

Data Distributions

The NEJM dataset was divided into training, validation, and testing splits by UNC. These splits were adopted by the GHL ML team and used for GA model development. The statistics and purposes of these splits are shown in Table 1. The range of gestational age by exam for the entire NEJM dataset is shown in Figure 1.

Subset	Patients	Exams	Videos	Purpose
Training	5,070	8,067	85,083	Training model weights via backpropagation
Tuning	1,270	1,992	20,784	Optimizing hyperparameters
Main testing	716	1,278	12,053	Estimating performance
Novice testing	129	147	992	Estimating performance for novice users
IVF testing	47	79	518	Estimating performance with accurate GA ground truth

Table 1. NEJM subsets by patients, exams, and videos

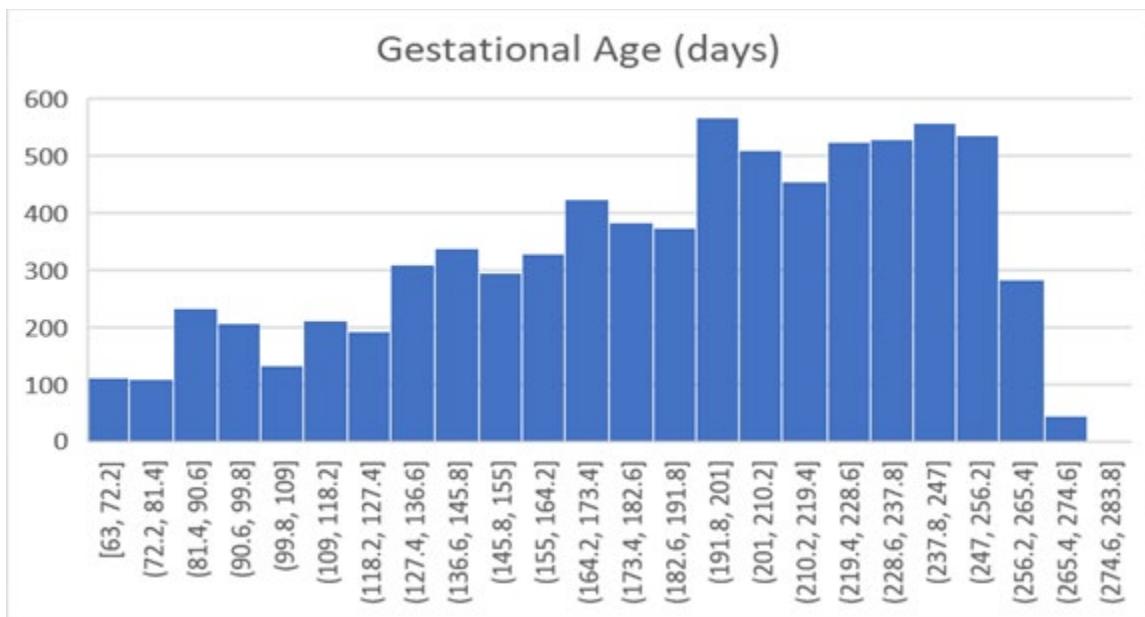


Figure 1. Histogram of gestational age in NEJM dataset; min=63, max=280, mean=185.9, median=195.3.