**Appendix 7: Algorithms, Models Applied and Performance Metrics**

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| **Dataset Name** | **Algorithms/Models Used** | **Purpose of Models** | **Performance Metrics** |
| FPUS23: An Ultrasound Fetus Phantom Dataset with Deep Neural Network Evaluations for Fetus Orientations, Fetal Planes, and Anatomical Features | ResNet34, Faster-RCNN, Neural Architecture Search (NAS), Pruning and Quantization | Bounding boxes of fetus anatomies, identification of diagnostic planes, fetus orientation, anatomical features | Accuracy, F1-score, mean Average Precision (mAP), mean Average Recall (mAR) |
| Large-scale annotation dataset for fetal head biometry in ultrasound images | Bounding boxes, ellipses, run length encoding (RLE) | Detailed annotations of fetal head biometry | Intraclass Correlation Coefficients (ICC), Jaccard similarity indices (JS) |
| The JNU-IFM dataset for segmenting pubic symphysis-fetal head | Manual segmentation, automatic measurement algorithms | Segmentation labels of symphysis pubis-fetal head | Not mentioned |
| The construction and application of an ultrasound and anatomical cross-sectional database of structural malformations of the fetal heart | Not specified | Establishment of a cross-sectional database correlating ultrasound images with anatomical images to detect congenital heart defects | Not specified |
| PSFHS: Intrapartum ultrasound image dataset for AI-based segmentation of pubic symphysis and fetal head | UNet variations, dual decoder strategy, shape-constrained loss function | Pixel-wise segmentation of pubic symphysis and fetal head | Dice coefficient for consistency |
| How much can AI see in early pregnancy: A multi-center study of fetus head characterization in week 10–14 in ultrasound using deep learning | Deep learning-based Fetus Framework, RetinaNet detector with DenseNet-121 backbone, Logistic Regression classifier, ResNet-50, Xception, DenseNet-121 | Identification of nine key intracranial structures, classification of standard and non-standard sagittal views | Sensitivity, specificity, area under the curve (AUC), accuracy, precision, F1-Score |
| Generalisability of fetal ultrasound deep learning models to low-resource imaging settings in five African countries | Densenet-169, Transfer Learning, Combination Approach | Classification of fetal planes (femur, thorax, head, abdomen) | Area Under the Curve (AUC), accuracy, recall, precision |
| Automated measurement of fetal head circumference using 2D ultrasound images | Haar-like features, random forest classifier (RFC), Hough transform, dynamic programming, ellipse fitting | Automated measurement of HC, estimation of gestational age (GA) | Difference (DF), absolute difference (ADF), Hausdorff distance (HD), Dice similarity coefficient (DSC), mean difference in GA |
| Fetal Abdominal Structures Segmentation Dataset Using Ultrasonic Images | Manual and semi-automated segmentation | Accurate segmentation of fetal abdominal structures for measurement of abdominal circumference | Quality control criteria ensuring exclusion of images with calipers or acoustic shadows |
| Automated annotation and quantitative description of ultrasound videos of the fetal heart | Random forests, particle filtering | Detection and classification of fetal heart views, estimation of cardiac phase and orientation | Classification error rate, orientation error, phase error |
| Real-time diameter of the fetal aorta from ultrasound | Convolutional Neural Network (CNN), Convolution Gated Recurrent Unit (C-GRU), CyclicLoss function | Measurement of the vascular diameter of the fetal abdominal aorta | Mean squared error (MSE), relative error (RE) |
| Values and validity of fetal parameters by ultrasound and Doppler as markers of fetal lung maturity | Not specified | Assessment of fetal lung maturity to predict neonatal respiratory distress syndrome (RDS) | Sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), accuracy |
| Generative Diffusion Model Bootstraps Zero-shot Classification of Fetal Ultrasound Images In Underrepresented African Populations | Latent Diffusion Model (LDM), Low-Rank Adaption (LoRA), Convolutional Neural Networks (DenseNet169, ResNet18, EfficientNet b0, MobileNet v2, Vision Transformer ViT b16) | Improvement in zero-shot classification accuracy of fetal ultrasound images in low-resource settings | Accuracy, Recall, Precision, F-score, Area Under the Curve (AUC) |
| Automatic detection of complete and measurable cardiac cycles in antenatal pulsed-wave Doppler signals | Template matching, Support Vector Machine (SVM), Artificial Neural Network (ANN) | Detection accuracy of complete and measurable cardiac cycles | Accuracy of detection |