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**BS Computer Science 6th Semester (Morning)**

| SR NO | Paper Title | Author | Dataset | Algorithm/Models | Results |
|---|---|---|---|---|---|
| 1 | Improvement of Multi Layer Perceptron Classification on Cervical Pap smear data with Feature Extraction | K. Hemalatha<br>Dr. K. Usha Rani | Pap smear Herlev dataset | Artificial Neural Network | 6.98% accuracy<br>29.71% precision |
| 2 | Enhancing cervical cancer outcomes through early detection and prevention | Dr.M.Saravanan<br>K. Keerthi | Pap smear Herlev dataset | Convolutional neural networks | 42% accuracy<br>80.65% binary classification |
| 3 | Segmentation and Classification Techniques for Pap Smear Images in Detecting Cervical Cancer: A Systematic Review | Betelhem zewdu<br>Andrzej rusiecki<br>Krzysztof halawa | Pap smear Herlev dataset | Mask RCNN<br>CNN<br>SVM | 90% accuracy<br>98.86% binary classification |
| 4 | Segmentation and Classification of Nuclei in PAP-smear Images for Automated Cervical Cancer Screening | Srishti Gautam | Pap smear Herlev dataset | CNN<br>SLIC | 93.75% accuracy<br>99.3% binary classification<br>0.90 F-Score |
| 5 | CerviNet: A Novel Approach for Pap-smear Images Analysis for Cervical Cancer Classification | Zou Beiji<br>Xiaoyan Kui | Pap smear Herlev dataset | Vision Transformer (ViT) | 98.07% accuracy |
| 6 | Ordinal Losses for Classification of Cervical Cancer Risk | Tom´ eAlbuquerque<br>RicardoCruz<br>JaimeS.Cardoso | Pap smear Herlev dataset | Neural Networks<br>Parametric Model | 75.6% accuracy |
| 7 | Improving Hierarchical Decision Approach for Single Image Classification of Pap Smear | Dwiza Riana<br>Yudi Ramdhani<br>Rizki Tri Prasetio | Pap smear Herlev dataset | Hierarchical Decision Approach | 87.02% accuracy |
| 8 | Cervical cancer classification using combined machine learning and deep learning approach | Hiam Alquran<br>Wan Azani Mustafa<br>Mohammed Alsalatie | Pap smear Herlev dataset | support vector machines | 97.3% accuracy |
| 9 | A hybrid framework for cervical cancer classification by using deep feature fusion of cytology images | Swati Shinde<br>Madhura Kalbhor<br>Pankaj Wajire | Pap smear Herlev dataset | Artificial neural network | 97% accuracy |
| 10 | Implementation of sample Bootstrapping for resampling of Pap smear cell dataset | Anita Desiani<br>Yuli Andirani<br>Sugandi Yahdin | Pap smear Herlev dataset | K-Nearest Neighbor | 39.5% accuracy<br>33.87% precision<br>34.67% recall |
| 11 | Deep Learning based Cervical Cancer Classification and Segmentation from Pap Smears Images using an EfficientNet | Krishna Prasad<br>Dr B. Sai Chandana | Pap smear Herlev dataset | Contrast local adaptive histogram equalization | 97.42% sensitivity<br>99.36% specificity<br>98.29% accuracy |

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| **12** | Classification of Cervical Cancer Using Assembled Algorithms in Microscopic Images of Papanicolaou | Obrayan H. G´omez<br>Paulina de la Mata<br>Anchez-DelaCruz | Pap smear Herlev dataset | Assembled Algorithms | 95.74% accuracy |
| **13** | Bi-path Architecture of CNN Segmentation and Classification Method for Cervical Cancer Disorders Based on Pap-smear Images | Bambang Suprihatin<br>Ajeng I. Putri<br>Anita Desiani | Pap smear Herlev dataset | Convolutional neural networks | 0.85 F-Score |
| **14** | Clustering Techniques on Pap-smear Images for the Detection of Cervical Cancer | Mithlesh Arya<br>Namita Mittal<br>Girdhari Singh | Pap smear Herlev dataset | K-mean clustering<br>Fuzzy c-mean clustering | 0.815 purity<br>0.875 purity |
| **15** | Majority Voting as Ensemble Classifier for Cervical Cancer Classification | Yulia Resti<br>Ning Eliyati<br>Titania Jeanni Carisa | Pap smear Herlev dataset | Ensemble Methods | 1.72% accuracy |
| **16** | Segmentation of Cervical Cancer by OLHT Based DT-CWT Techniques | P. R. Sheebha Rani<br>R. Jemila Rose | Pap smear Herlev dataset | Oriented Local Histogram Technique (OLHT)<br>Dual-Tree Complex Wavelet Transform (D T-CWT)<br>Local Binary Pattern | 98.39% accuracy<br>97.52% Sensitivity<br>97.48% precision<br>99.46% specificity<br>97.38% PPV<br>92.27% NPV<br>141.81% LRP<br>96.82% FPR<br>0.0946% LRN<br>91.46 NPR |
| **17** | A New Weighted Deep Learning Feature Using Particle Swarm and Ant Lion Optimization for Cervical Cancer Diagnosis on Pap Smear Images | Mohammed Alsalatie<br>Hiam Alquran<br>Ala'a Zyout<br>Reham Kaifi | Pap smear Herlev dataset | particle swarm optimization (PSO)<br>SVM | 99.5% accuracy<br>98.9% accuracy |
| **18** | Improvised kernel graph cuts and continuous max-flow optimization scheme- for enhanced segmentation in Cervical Cancer Detection | Ch. Rajarao<br>R.P. Singh | Pap smear Herlev dataset | Improvised Kernel Graph Cuts<br>Continuous Max-Flow Optimization | 3.21% accuracy<br>4.53% Sensitivity<br>4.12% precision |
| **19** | Deep-Neural Networks As Feature Extractors And Monolithic Neural Networks As Classifiers, For Classification Of Uterine Cervix Cancer Cases | Vinod Sharma<br>Mehbob Ali | Pap smear Herlev dataset | shallow neural network<br>CNN | 94.77% accuracy<br>92% F-value |
| **20** | Novel segmentation based cervical cancer detection using deep convolutional based neural network with relu | SOUMYA HARIDAS<br>DR. T. JAYAMALAR | Pap smear Herlev dataset | Deep Convolutional Neural Network (Deep CNN) | 97.8% accuracy |

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| **21** | Deep Learning and Transfer Learning Methods to Effectively Diagnose Cervical Cancer from Liquid-Based Cytology Pap Smear Images | Lenis Wong<br>Andrés Ccopa<br>Elmer Diaz<br>Sergio Valcarcel | Pap smear Herlev dataset | deep learning, transfer learning<br>ResNet50V2<br>ResNet101V2 | 0.97 accuracy<br>0.98 precision |
| **22** | Integrating Autoencoder-Based Hybrid Models into Cervical Carcinoma Prediction from Liquid-Based Cytology | Ferdaous Idlahcen<br>Ali Idri<br>Hasnae Zerouaoui | Pap smear Herlev dataset | AdaBoost<br>MLP<br>RF | (99.30%, 99.20%, 98.48%) accuracy |
| **23** | Privacy Preserved Cervical Cancer Detection Using Convolutional Neural Networks Applied to Pap Smear Images | Shtwai Alsubai<br>Michal Gregus<br>Huma Mughal | Pap smear Herlev dataset | Convolutional neural networks | 0.9113% accuracy |
| **24** | An Efficient Water Strider Algorithm with Auto Encoder for Cervical Cancer Diagnosis using Pap Smear Images | Balamurugan S.P. | Pap smear Herlev dataset | water strider algorithm with autoencoder for cervical cancer diagnosis (WSAAE-CCD) | 0.936 F1-Score |
| **25** | Improving Prediction of Cervical Cancer Using KNN Imputed SMOTE Features and Multi-Model Ensemble Learning Approach | Hanen Karamti<br>Raed Alharthi<br>Amira Al Anizi<br>Shtwai Alsubai<br>Muhammad Umer<br>Ala' Abdulmajid Eshmawi | Pap smear Herlev dataset | KNN Imputed SMOTE Features | 99.99% accuracy<br>99.99% precision<br>99.99% recall<br>99.99% F1 score |