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(71)Name of Applicant : 1)Dr.G.Venkata Hari Prasad Address of Applicant : Professor, Electronics and Communication Engineering, CMR College of Engineering, Kandlakoya, Medchal Road, Hyderabad-501401 2)K.Vidyasagar 3)Dr.D.Sudha 4)P V Ramana Murthy 5)Mr. S Ajay kumar 6)Mr. G.Murali 7)Dr. C.Arunkumar Madhuvappan 8)Mr. B.Rajasekaran 9)Dr. Shaik. Jakeer Hussain 10)Dr.M.Pradeep 11)Dr.T.Srikanth 12)KSS Nagateja Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.G.Venkata Hari Prasad Address of Applicant :Professor, Electronics and Communication Engineering, CMR College of Engineering, Kandlakoya, Medchal Road, Hyderabad-501401 2)K.Vidvasagar :G06N0003040000, G06K0009620000, G06N0003080000, Address of Applicant :Electronics and Instrumentation Engineering, VNR Vignana Jyothi (51) International classification G06T0007000000, G06K0009660000 Institute of Engineering & Technology, Hyderabad ---3)Dr.D.Sudha (86) International Application :NA Address of Applicant :Department of Electronics and Communication Engineering, CMR No :NA College of Engineering, Kandlakoya, Medchal Road, Hyderabad-501401 Filing Date (87) International Publication 4)P V Ramana Murthy : NA Address of Applicant :Department of CSE, Malla Reddy Engineering College, Main campus, No (61) Patent of Addition to Maisammaguda, Secunderabad ---:NA Application Number 5)Mr. S Ajay kumar :NA Filing Date Address of Applicant :Department of CSE, Malla Reddy Engineering College, Main campus, (62) Divisional to Application Maisammaguda, Secunderabad --:NA Number 6)Mr. G.Murali :NA Address of Applicant :Assistant Professor, Department of Electronics and Communication Filing Date Engineering, Vinayaka Mission's Kirupananda Variyar Engineering College, NH 47, Sankari Main Road, Periyaseeragapadi, Salem - 636308. 7)Dr. C.Arunkumar Madhuvappan Address of Applicant : Assistant Professor, Department of Electronics and Communication Engineering, Vinayaka Mission's Kirupananda Variyar Engineering College, NH 47, Sankari Main Road, Periyaseeragapadi, Salem - 636308. --8)Mr. B.Rajasekaran Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, Vinayaka Mission's Kirupananda Variyar Engineering College, NH 47, Sankari Main Road, Periyaseeragapadi, Salem - 636308. --9)Dr. Shaik, Jakeer Hussain Address of Applicant :Department of CSE, Malla Reddy Engineering College, Main campus, Maisammaguda, Secunderabad 10)Dr.M.Pradeep Address of Applicant :Department of ECE Shri Vishnu Engineering College for Women Bhimavaram Andhrapradesh ---11)Dr.T.Srikanth Address of Applicant :Malla Reddy Institute of Technology and Science, Secunderabad ------12)KSS Nagateja Address of Applicant :Department of EEE, Malla Reddy Engineering College, Hyderabad ---

(54) Title of the invention : TUBERCULOSIS DETECTION USING ARTIFICIAL INTELLIGENCE (AI)

(57) Abstract :

7. ABSTRACT Tuberculosis (TB), a potentially serious infectious lung disease, continues to be a leading cause of worldwide death. Proven to be conveniently efficient and cost-effective, chest X-ray (CXR) has become the preliminary medical imaging tool for detecting TB. The need to strengthen the treatment and screening in TB affected countries. In this proposal, a systematic review is carried on deep learning-based Computer-Aided Diagnostic (CAD) systems that are used to analyze chest X-rays for diagnosing pulmonary tuberculosis (TB). Deep learning has recently become one of the most successful techniques, particularly in the analysis of medical images. In Deep learning Convolutional Neural Networks (CNNs) are widely used for TB detection. A CNN model is commonly comprised of convolutional layers, sub-sampling/ pooling layers, and fully connected layers. By assembling the individual CNN models, the classification accuracy of CXRs is further improved. Moreover, each model presents an unstable and unpredictable performance on different datasets and for different classification tasks. The Figure associated with Abstract is Fig 3.

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