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1.	<p><b>Authors:</b></p>	<p><b>Naveen Kumar Dubey, M.P.S. Chawla</b></p>	1-6
	<p><b>Paper Title:</b></p>	<p><b>Short-Term Solar Forecasting Model using Artificial Neural Networks</b></p>	
<p><b>Abstract:</b> in present context, Electrical Energy generation in India is mostly based on the conventional sources, but the time has come to be not depend on these conventional sources and to make renewable Energy sources capable of producing total energy demand by its own. So the focus has been shifted towards Wind, Hydro and photovoltaic (PV) power generation. Accurate forecasting of solar irradiance is required for effective and efficient power scheduling &amp; dispatching. And this weather data is needed by the control engineers for planning their control strategies. In this paper a simple approach for weather prediction is proposed which relies on hourly weather data such as Temperature, Relative humidity, surface pressure, wind speed &amp; direction and solar irradiance. The solar forecasting model to predict short-term solar irradiance &amp; other weather parameters, is done by using Leven-berg Marquardt and Bayesian regularization back-propagation algorithms with standard non-linear autoregressive with external input NARXfeedforward Network. This approach is simple to implement fast in execution and provides good results for short-term time horizon predictions.</p>		<p><b>Keywords:</b> Solar power, Short-term forecasting, Artificial neural networks.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. P.A.G.M. Amarasinghe and S.K. Abeygunawardane, "An Artificial neural Network for solar Power Generation Forecasting Using Weather Parameters" IESL, pp.[431-438], 2018.</li> <li>2. Mohamed Abuella and Badrul Chowdhury, "Solar Power Forecasting Using Artificial Neural networks" north American power symposium (NAPS), pages 1-5, oct 2015.</li> <li>3. Fei Wang, ZengOiang Mi, Shi Su and Hongshan Zhao " Short-TermSolar Irradiance Forecasting Model Based on Artificial Neural Network using Statistical Feature Parameters" Energies 1355-1370, 2012.</li> <li>4. Tamer khatib, Azah Mohamed, K. sopian and M. Mohmoud, "Assessment of Artificial Neural Networks for hourly Solar Radiation Prediction" international journal of photoenergy, 7 pages volume 2012.</li> <li>5. S.Waterkam and S.Premrudeepreechacham "Forecasting of Solar Irradiance for Solar Power Plants by Artificial neural Network" Chiang Mai50200Thailand7803-9156-X-IEEE,2005.</li> <li>6. Mellit A., Benghanem m., Bendekhis M., "Artificial Neural Network Model for Prediction Solar Radiation data :application for sizing stand-alone Photovoltaic Power system" IEEE power engineering society General Meeting, 2005,pp. 40-44 Vol. 1.</li> <li>7. H.parmar "Artificial Neural Network based modeling of photovoltaic system" (IJLTET) Vol.5 Issue 1 jan.2015.</li> <li>8. M.W. Gardner &amp; S.R. Dorling, "Artificial Neural Networks (The multilayer Perceptron) – A review of applications in the atmospheric sciences", vol.32 pp2627-2636, 1998.</li> <li>9. Bernaedo penna Resedbe de Caryalho &amp; wilian soares lacerda, Antono de Padua Barga. "RRS LS-SVM: a new strategy for 'a priori' sample selection". Neural comput &amp; applications: pp.227-234 May 2007.</li> </ol>	
2.	<p><b>Authors:</b></p>	<p><b>Ayushi Jadia, M.P.S Chawla</b></p>	7-13
	<p><b>Paper Title:</b></p>	<p><b>Image Classification and Detection of Insulators using Bag of Visual Words and Speeded up Robust Features</b></p>	
<p><b>Abstract:</b> Electricalsubstation online monitoring in computer vision technology is based on image processingalgorithm to perform visual analysis.This paperpresents classification of ceramicand glass insulators through Bag of Visual Words and detection of these insulators by Point Feature Matching.The training image datasets are used for categorization by forming a visual vocabularywhile a new unlabeled image from testing image dataset is classify using nearest neighbor classification method for features descriptor. For detection we use Speeded up Robust Features for detecting position of insulator present in cluttered scene image. Matching process is done between test and reference image and decision is made based on similar features. Weconducted experiment on insulators to verify the superiority of our proposed method.The proposed method can be used in security, surveillance and inspection system.</p>		<p><b>Keywords:</b> Classification, Bag of Visual Words (BOVW), K-Nearest Neighbor, Detection, Point Feature matching, Speeded up Robust Features (SURF), Insulators</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Olivier Lezoray,Christophe Charrier, Hubert Cardot, and SebastienLef'evre, "Machine Learning in Image Processing," EURASIP Journal on Advances in Signal Processing, p. 2, 2008.</li> <li>2. Haiyan Wang and Fanwei Meng, "Research on power equipment recognition method based on image processing," EURASIP Journal on Image and Video Processing, pp. 1-11, 2019 April.</li> <li>3. Yongjie Zhai, Rui Chen, Qiang Yang, Xiaoxia Li,Zhenbing Zhao, "Insulator Fault Detection Based on Spatial Morphological Features of Aerial Images", IEEE Access, vol. 6, pp. 35316-35326, 2018.</li> <li>4. S. Lazebnik,C.Schmid, J. Ponce "Beyond bags of features: Spatial pyramid matching for recognizing natural scene categories," IEEE Computer Society Conf. on Computer Vision and Pattern Recognition, vol. 2, pp. 2169-2178, 2006.</li> <li>5. J.Sivic, A. Zisserman, "Video Google: A Text Retrieval Approach to Object Matching in Videos," Proceedings of the Ninth IEEE International Conference on Computer Vision (ICCV) , vol. 2, 2003.</li> <li>6. K. M. C. Schmid, "A Performance Evaluation of Local Descriptors," IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, vol. 27, no. 10, pp. 1615-1630, october 2005.</li> <li>7. Y.-G. J. and C.-W. N. Wanlei Zhao, "Keyframe Retrieval by Keypoints: Can Point-to-Point Matching Help?," In Proc. of 5th Int'l Conference on Image and Video (CIVR), vol. 2006, pp. 72-81, 2006.</li> <li>8. P. P. Li Fei-Fei, "A Bayesian Hierarchical Model for Learning Natural Scene Categories," In Proc. of the 2005 IEEE Computer Society Conf. on Computer Vision and Pattern Recognition, pp. 524-531, 2005.</li> <li>9. R. A. Sameer, Abdul Amir Abdullah Karim, "Image Classification Using Bag of Visual Words (BoVW)," AI-Nahrain Journal of</li> </ol>	

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