

IDEATION PHASE

LITERATURE SURVEY

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| DATE | 03 September 2022 |
| TEAM ID | PNT2022TMID13687 |
| PROJECT NAME | Predicting the energy output of wind turbine based on weather condition |

| Literature Survey: | | | | |
|--------------------|---|--------|------|--|
| S.NO | TITLE | AUTHOR | YEAR | PROPOSED SYSTEM |
| 1 | A Multi-Step Heifeng 2021 A Multi-step wind power prediction Prediction lu, Xun method was proposed by exploiting Method for Wind dou, Rong Power Based on sun Improved TCN convolution (MSC) and adopted to Cumulative Error optimize the | | | improved TCN to correct the cumulative error. First, multi-scale selfto Correct attentiveness (SA) were problem that a single-scale convolution kernel of TCN is difficult to extract temporal and spatial features at different scales of the input sequence. |
| 2 | Remotely Mark A. 2019 Remotely sensed surface winds Sensed Winds Bourassa, (scalar winds and vector winds) and Wind Thomas with related material on surface Stresses for Meissner, Ivana Cerovecki stress, air-sea heat fluxes, currents, sea state, and precipitation. | | | |
| 3 | Wind Muhammad 2020 Wind forecasting methods and Generation Shahzad the artificial neural network, The Forecasting Nazir, instrument used to measure wind Methods and Fahad Alturise, assimilation is analyzed and Proliferation of Sami discussed, accurately. The high | | | |

Artificial Neural Alshmrany forecasting accuracy could be

Network

achieved through proper handling
and calibration of the wind-

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| | | | | forecasting instrument and method. |
| 4 | Long term wind power forecast using adaptive wavelet neural network | Bhaskar-Kanna, Sn-Singh | 2016 | Mapping the NWP's wind speed and wind direction forecasts to wind power forecasts. Wind direction inherently being a circular variable, for better training and function approximation, a transformed version of wind direction variables are used as inputs. |
| 5 | Data mining for wind power forecasting | Lionel-Fugon, George-Kariniotakis, Jeremie-Juban | 2008 | Data Mining type of models for wind power forecasting. Models that are examined include neural networks, support vector machines, the recently proposed regression trees approach, and others. Evaluation results are presented for several real wind farms. |

REFERENCES:

1. Luo H, Dou X, Sun R and Wu S (2021) A Multi-Step Prediction Method for Wind Power Based on Improved TCN to Correct Cumulative Error. *Front. Energy Res.* 9:723319. doi: 10.3389/fenrg.2021.723319.
2. Bourassa MA, Meissner T, Cerovecki I, Chang PS, Dong X, De Chiara G, Donlon C, Dukhovskoy DS, Elya J, Fore A, Fewings MR, Foster RC, Gille ST, Haus BK, Hristova-Veleva S, Holbach HM, Jelenak Z, Knaff JA, Kranz SA, Manaster A, Mazloff M, Mears C, Mouche A, Portabella M, Reul N, Ricciardulli L, Rodriguez E, Sampson C, Solis D, Stoffelen A, Stukel MR, Stiles B, Weissman D and Wentz F (2019) Remotely Sensed Winds and Wind Stresses for Marine Forecasting and Ocean Modeling. *Front. Mar. Sci.* 6:443. doi: 10.3389/fmars.2019.00443.
3. Nazir, Muhammad Shahzad, Fahad Alturise, Sami Alshmrany, Hafiz. M. J Nazir, Muhammad Bilal, Ahmad N. Abdalla, P. Sanjeevikumar, and Ziad M. Ali. 2020. "Wind Generation Forecasting Methods and Proliferation of Artificial Neural Network: A Review of Five Years Research Trend" *Sustainability* 12, no. 9: 3778. <https://doi.org/10.3390/su12093778>.
4. Bhaskar-Kanna, Sn-Singh, Long term wind power forecast using adaptive wavelet neural network(2016), doi.org/[10.1109/UPCON.2016.7894735](https://doi.org/10.1109/UPCON.2016.7894735).
5. Lionel-Fugon, George-Kariniotakis, Jeremie-Juban, Data mining and wind power prediction(2008), Accepted 1 February 2012, Available online 29 March 2012. <https://doi.org/10.1016/j.renene.2012.02.015>.