Journal 1 -

The journal discusses the potential of artificial intelligence (AI) in the energy sector, focusing on its ability to improve efficiency, reduce costs, and maximize renewable energy use. AI can help address challenges such as grid stability and demand forecasting, and can be used for predictive maintenance, automation, and smart grid advancements. AI can also reduce energy consumption and costs, making the use of safe, green energy sources faster and more productive for grids worldwide. Emerging economies are driving the AI implementation in the power sector, with companies like DeepMind using machine learning (ML) models to forecast power production 36 hours in advance. AI can also contribute to sustainable development goals, such as equitable access to affordable, secure, and sustainable clean electricity.

Journal 2 –

The journal delves into the application of artificial neural networks (ANN) for predicting capital structure in financial markets. It emphasizes the superiority of AI over traditional models, showcasing its potential to enhance decision-making processes and improve business value through accurate predictions. The study explores the use of ANN in financial analysis, classification of patterns, optimization, and control within finance and accounting, highlighting its versatility and effectiveness in addressing complex financial challenges.

Journal 3 -

The journal "Forecasting copper price by application of robust artificial intelligence techniques" explores the use of Gene Expression Programming (GEP) and Ant Colony Optimization (ACO) algorithms to predict copper prices accurately. The study involves various layers like fuzzification, rule, normalization, defuzzification, and output in the GEP model. ACO mimics ant behavior to optimize parameters for the ANFIS model, enhancing prediction accuracy.

Journal 4 –

This journal develops an integrated systems dynamics model called ALUMINIUM to assess the long-term outlook for global aluminum production, supply to markets, reserves, and price. The model incorporates aluminum reserves, production, market supply, recycling, population growth, and other factors along with feedback loops and market mechanisms. Model outputs suggest aluminum supply to markets will peak around 2080 and decline thereafter as reserves are depleted, with recycling becoming dominant after 2020 but eventually declining as in-use stocks decrease over the long term. The study examines sustainability of aluminum supply under various scenarios.

Journal 5-

This journal discusses the limitations of traditional time series techniques in forecasting long-term mineral commodity prices due to complex market dynamics. It proposes combining Chaos Theory and Machine Learning as a novel approach to overcome this. Chaos Theory can identify key influencing factors and their time lags, while Machine Learning can model complex patterns and relationships. This combined approach provides a more accurate way to predict mineral commodity prices over long durations by representing the nonlinear behavior of these markets.

Journal 6 –

The article aims to identify the best model for predicting monthly iron ore price. It develops and compares predictive models using ARIMA, SVR, ANN, CART and introduces a new Group Method of Data Handling (GMDH) approach. Different parameters of each model are optimized and their predictions on testing data are evaluated based on errors and accuracy metrics. The results show that the GMDH model provides the most accurate predictions with lowest errors like MAPE and highest variance accounted for, making it a powerful technique for iron ore price forecasting.

Journal 7 –

This journal presents various innovative long-range forecasting models to forecast Brazil's aluminium consumption for the year 2000. Models include trend projections, learning curves, translog and extensive translog consumption models incorporating variables like GDP, price. Forecasts are evaluated on accuracy over 1981-1987. Consumption is forecasted to be in the range of 800,000-1,300,000 tonnes in 2000, with simpler learning and time-varying coefficient models most accurate historically. The study highlights how alternative modeling approaches can aid long-term forecasting.

Journal 8 –

This research aims to address the low efficiency and accuracy of manual scrap grading methods. It develops a deep learning model called CSBFNet using SE attention and Efficient for automated multi-category classification and grading of steel scrap. The model is trained and evaluated on two datasets containing labeled scrap images collected from the lab and on-site. Experimental results show CSBFNet achieves over 90% map and accuracy, outperforming other models, demonstrating its effectiveness for intelligent scrap inspection. The model has potential applications in enhancing robotic sorting and integrating with electric furnace systems for improved steelmaking processes.

Journal 9 –

This journal proposes using the ARIMA time series forecasting method in SAS to predict future sales of plastic products based on historical monthly sales data from 2012-2014, in order to help companies forecast raw material needs and plan production efficiently. ARIMA analysis of the data achieved 74% accuracy for one product and 68% for another in short-term forecasts. The results were delivered visually through a web dashboard, providing companies a way to view sales trends and forecasts to inform strategic planning.

Journal 10 –

Pakistan's energy mix heavily reliant on gas and oil despite abundant coal reserves. Mineral sector dominated by gas, oil, gypsum, and coal, with gypsum aiding reclamation and poverty alleviation. Forecasting these minerals crucial for addressing energy challenges. Box-Jenkins, ARAR, and HW models used for parametric forecasting, while SSA and MSSA for nonparametric. HW suitable for gas and coal, ARIMA and MSSA for gypsum and oil. Urgent need to optimize coal production through incentives and modernization.