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Potential of Neural Networks for Air Quality Sensor Data Processing and Analysis

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Air quality sensors represent an emerging technology for air monitoring quality. Their main advantage is that they are significantly cheaper monitoring devices compared to standard monitoring equipment. Low-cost, mass-produced sensors have a potential to form much denser monitoring networks and provide more detailed information on air pollution distribution. The drawback of sensor air pollution monitoring lies in the lower quality of measurements than that of standard monitoring equipment. It is known that the quality of air pollution sensor measurements is negatively influenced by meteorological factors, such as temperature or humidity. Neural networks are a potentially valuable technique for processing monitoring data to transform sensor measurements, complemented with meteorological data, into more accurate estimations of pollutant concentrations. The second possible use of neural networks with sensor data is their application as a prediction and analysis tool.

Summary

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