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Patent Search

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Abstract:

INTERNET OF THINGS (IOT), ANN BASED SMART METEOROLOGICAL CONDITIONS MONITORING AND PREDICTION SYSTEM Abstract: In the big data environment, we design personalized information of college libraries based on big data from three aspects: the overall architecture of the system model, the functional model of the system, and design of system interface modules according to the design principles and requirements of the personalized information service system of the university library Service design. In terms of the functional design of the platform, the service platform is divided into four levels: accurate identification of user needs based on big data, personalized customized services based on artificial intelligence, academic research and discussion space based on integrated media, and fine-grained subject resource aggregation knowledge. On this basis, a centralized model of individualized services of university libraries including internal and external personnel, information resources, technical services, processes, platforms, and environment has been constructed. Artificial intelligence (AI) is one of the emerging trends and applications of computing in library programming computers to do things, which if done by humans, would be said to require intelligence. The ultimate promise of artificial intelligence in libraries is to develop computer systems or machines that think, behave, and in fact rival human intelligence, and this clearly has major implications on librarianship. The application of artificial intelligence in the library has become pervasive. They include expert systems for reference services, book reading and shelf-reading robots, virtual reality for immersion among others. Although the incorporation of artificial intelligence in libraries can be perceived to alienate librarians from their users, it will probably help libraries do more than taking over the jobs of librarians. It will enhance their services delivery. Artificial intelligence will greatly improve library operations and services and will upgrade and heighten the relevance of libraries in an ever-changing digital society. It is also critical for forecasting natural disasters like hurricanes and typhoons. Precision weather forecasting aid agriculture, transportation, and other industries greatly. Accurate weather forecasting is critical for limiting natural catastrophe damage. The Internet of Things (IoT) network architecture that combines hardware and wireless communication networks to process and analyze data in real time. As a result, the proposed topology-based monitoring system based on the Internet of Things and forecasting using an artificial neural network. The Internet of Things is set up to collect and distribute data from a Wi-Fi network. This suggested topology's major objective is to monitor and record meteorological conditions such as temperature, humidity, barometric pressure, and precipitation. The ANN algorithm has been tuned for weather forecasting. According to the study's findings, the proposed arrangement gives more exact weather for conventional methodologies.

Complete Specification

Description: Descriptions:

Modern technology is capable of meeting the needs of modern humanity. The Internet of Things (IoT) has the potential to change how individuals perceive and live in modern society. The bulk of IoT applications in agriculture and the environment necessitate constant monitoring. These issues cover a wide range of topics. Future generations may benefit from the Internet of Things. Beyond data collecting and cloud storage, the Internet of Things has potential applications in the environmental sector. Environmental factors can be forecasted using predictive models using data acquired by Internet-of-Things-connected sensors. Making decision-making faster and more accurate results in a safer and healthier environment for all forms of life, including suppliers, technicians, farmers, distributors, customers, entrepreneurs, and government officials. It is difficult, if not impossible, to forecast the long-term relationships between several variables using standard modeling techniques. Complex modeling techniques can shed light on this phenomenon. Many deep learning models based on RNNs or CNNs have been developed. Multivariate time series can improve forecast precision while reducing reliance on periodic data. Climate change is one of humanity's most pressing issues. Most climate experts are concerned that human-caused global warming will harm our planet. Human activity has resulted in a reduction in biodiversity, soil erosion, harsh weather, increasing sea levels, and global warming. Individuals' health, the economy, food quality, and energy use are all affected. The intricacy, duration, and fluctuation of weather need a huge amount of data. Despite being geographically close, local climates can differ in terms of temperature, humidity, and other climatic features. By anticipating greenhouse temperatures, this system hopes to boost greenhouse producers' production. Temperature, humidity, soil moisture, wind speed and direction will all play a role in this inquiry. Farmers must anticipate and respond to weather variations in order to ensure the sustainability of natural resources. As a result, a multivariate convolutional Latent Semantic Model (LSTM) network was integrated in an IoT-based greenhouse temperature forecast system. The ambient temperature prediction technique is used to forecast the local

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