Dr. Huan Li from Datasea Publishes High-Level Scientific Paper on Europe's ScienceDirect Website

In July 2024, Dr. Huan Li, Deputy General Manager of the R&D Department at Shuhai Beijing， VIE of Datasea Inc., published a high-level scientific paper on Europe's ScienceDirect website titled "Exploring Spatiotemporal Features of Surface Water Temperature for Lake Balaton in the 21st Century Based on Google Earth Engine." Link to article.

ScienceDirect is a renowned academic publishing platform operated by Elsevier. It is one of the world's largest repositories of scientific, technical, and medical information. ScienceDirect includes over 3,800 academic journals and more than 35,000 e-books, offering a wide range of academic content and high-quality research literature. The platform covers multiple disciplines, including but not limited to physical sciences and engineering, life sciences, health sciences, and social sciences.

The paper "Exploring Spatiotemporal Features of Surface Water Temperature for Lake Balaton in the 21st Century based on Google Earth Engine" leverages the Google Earth Engine (GEE) to analyze surface water temperature variations of Lake Balaton, the largest lake in Central Europe, over the last two decades. Here are some key points:

1. **Data Utilization**:
    - The study utilizes multisource data on GEE to conduct detailed spatiotemporal analysis of temperature variations.
    - In-situ data is used for validation, achieving a temperature observation accuracy of 1.6°C and a seasonal quantile difference within 1°C.
2. **Findings**:
    - The study observed an increase in water temperature at 0.7°C per decade, closely matching the 0.6°C per decade rise in air temperature.
    - More notable warming was detected in annual minimum and winter temperatures, especially in the shallowest basin.
    - A cumulative temperature anomaly method was proposed to examine monthly temperature variations, showing distinct patterns between different lake basins.
3. **Implications**:
    - The findings suggest that the western, shallower regions of the lake exhibit higher temperatures during warmer months, while the deeper, eastern areas show elevated temperatures during cooler months.
    - Water depth is highly correlated with seasonal temperature variations, and factors such as windspeed and artificial surfaces impact near-coast water temperatures.

Shuhai Beijing's Technical Advantages: Dr. Huan Li, the third author of this paper, represents Shuhai Beijing's strong technical expertise. The company's strengths in technical research and development are highlighted through:

1. **Advanced Data Analysis Capabilities**:
    - The use of GEE and multisource data integration reflects Shuhai's advanced analytical capabilities, allowing for comprehensive environmental monitoring and analysis.
2. **Innovative Methodologies**:
    - The development of new methods, such as the cumulative temperature anomaly method, showcases Shuhai's ability to innovate and improve existing analytical techniques.
3. **Validation and Accuracy**:
    - The high accuracy of the study's findings, validated by in-situ data, demonstrates Shuhai's commitment to precision and reliability in data analysis.
4. **Application of Findings**:
    - The practical implications of the study, such as the impact of artificial surfaces and windspeed on water temperatures, indicate Shuhai's focus on real-world applications and problem-solving.

By participating in this type of cutting-edge research, Datasea emphasizes its leading position in utilizing advanced technology for environmental monitoring and data analysis