SCICHART

Case Study

Customer:

SensiML

Industry:

Software Development

An AI hub for time series sensor data.

SensiML™

Decoding the data:

Who are SensiML?

SensiML is a company that specializes in providing software solutions for building and deploying machine learning algorithms on edge devices, mainly in the realm of sensor data analytics files, and real-time data streams.

Their platform enables developers to create intelligent sensor applications for a variety of use cases, including wearable devices, IoT (Internet of Things) devices, and health monitoring systems, among others.

SensiML's technology focuses on making the development of these applications more efficient and accessible, particularly by simplifying the process of sensor data annotation, machine learning model training, and model deployment to edge devices.

SensiML Data Studio

SensiML Data Studio is an AI hub for time series sensor data. It streamlines the development process for sensor-based applications providing an integrated environment for data management, annotation, and exploration combined with model development, validation, and deployment.

What were their requirements?

SensiML required various capabilities to enhance the management of its data.
Scichart offers multiple features to make data more accessible and digestible.

Efficient Handling of Large Datasets

SensiML needed a solution capable of efficiently managing voluminous time series sensor data, especially when dealing with high-frequency sensors or long-duration recordings.

Real-Time Performance

It was crucial for SensiML's Data Studio platform to maintain real-time performance, ensuring responsiveness and smooth operation even when processing extensive datasets.

Advanced Charting Capabilities

SensiML required advanced charting capabilities within Data Studio to visualize machine learning model outputs such as prediction probabilities, decision boundaries, and result metrics for better interpretability and explainability.

Scalability

The platform needed to be scalable to accommodate the increasing demands for analyzing extensive datasets without compromising performance or responsiveness.

Navigating the pitfalls:

The challenges of SensiML

Performance Bottlenecks

Existing charting capabilities within Data Studio led to performance bottlenecks when handling large volumes of time series sensor data, resulting in slow processing times and reduced responsiveness.

Limited Visualization Options

The platform lacked advanced visualization options, making it challenging for users to gain deeper insights into model behavior and make informed decisions based on the visualized data.

Lack of Interpretability

Without robust charting capabilities, SensiML's platform faced challenges in providing transparent and intuitive visualizations of machine learning model predictions, hindering the development of trust and confidence in the model outputs.

Unlocking SensiML's potential:

How SciChart helped SensiML

Advanced Charting Capabilities

SciChart's advanced charting features within Data Studio, allowing visualization of machine learning model outputs, including prediction probabilities, decision boundaries, and result metrics.

Performance Enhancement Solutions

Deployment of SciChart's high-performance data visualization tools within Data Studio, ensuring smooth rendering and interaction with large datasets, crucial for maintaining optimal performance.

Enhancements

SciChart's feature-rich charting tools are used within the Data Studio to convey complex information in a comprehensible manner, enhancing trust and confidence in model outputs, improving data annotation capabilities and speeding up time-to-insight of applications developed with SensiML.

Further results

SciChart's high-performance data visualization tool effectively addressed SensiML's challenges in scalability and interpretability/explainability.

With SciChart's robust rendering engine, SensiML can effortlessly handle large volumes of time series sensor data without compromising on performance or responsiveness, ensuring scalability for capturing labelling and analyzing extensive datasets.

Additionally, SciChart's advanced charting capabilities enabled SensiML to visualize machine learning model outputs, such as prediction probabilities, decision boundaries, and result metrics, enhancing interpretability and explainability. This allowed users to gain deeper insights into model behavior and make more informed decisions based on the visualized data, thereby improving the overall effectiveness of SensiML's platform.

If you need an intuitive interface for time series sensor data management and visualization, download our bespoke SciChart software today.

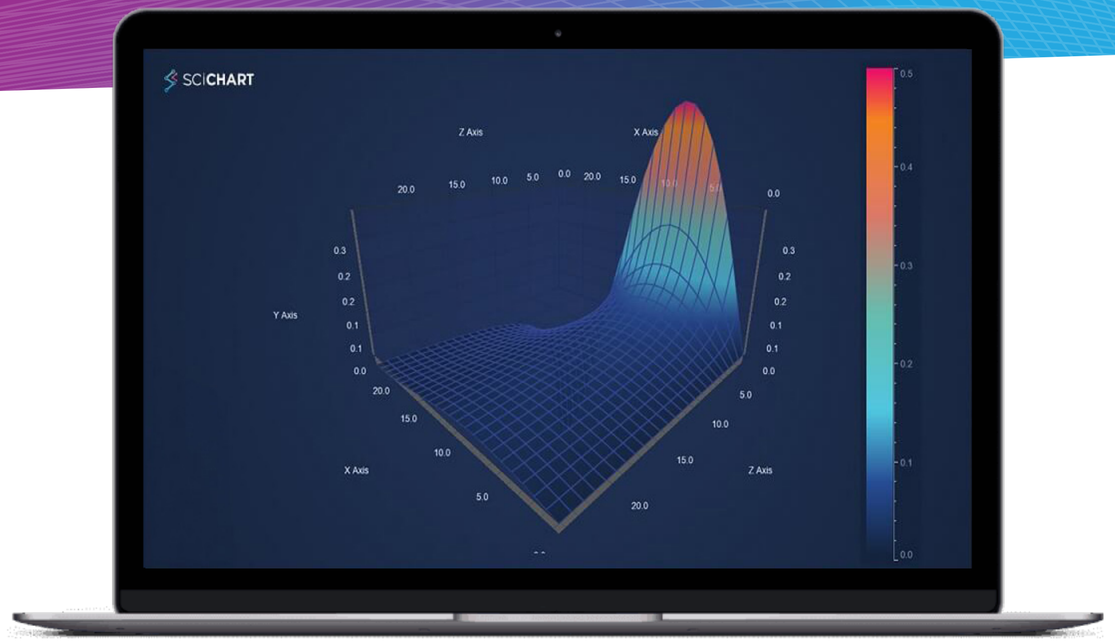
SensiML™

"SciChart revolutionized our approach to handling large datasets, empowering us to scale our platform seamlessly while maintaining optimal performance.

This scalability has been instrumental in meeting the growing demands of our users and accelerating innovation in sensor data analytics."

How SciChart can make your data more accessible

SciChart has the capability to display multiple axes on both the X and Y axes, allowing for the presentation of multiple datasets with various scales on a single chart. It also provides cross-platform compatibility by supporting various platforms such as WPF, iOS, Android, and JavaScript.



This enables developers to maintain consistency in charting experiences across different devices and operating systems. If you require a streamlined process for capturing and annotating high-quality datasets, SciChart's software has you covered.

SciChart is well-known for its high performance in rendering, especially for real-time updates and large datasets, handling millions of data points smoothly. SciChart can easily be integrated into existing applications and frameworks using APIs for data binding. This allows seamless integration with various data sources like databases, CSV files, and real-time data streams.

About SciChart

SciChart is a cross-platform WPF, iOS, Android and Xamarin Scientific & Financial Charting Library.

SciChart supports rendering of complex, interactive, real-time charts with many millions of data points for demanding scientific, medical and financial applications and embedded systems that require high performance, rich interaction and smooth updates.

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