AAAI PAPER

AAAI 2023 Demonstration

ANOVIZ

A Visual Inspection Tool of Anomalies in Multivariate Time Series

KAIST School of Computing

DEMO VIDEO

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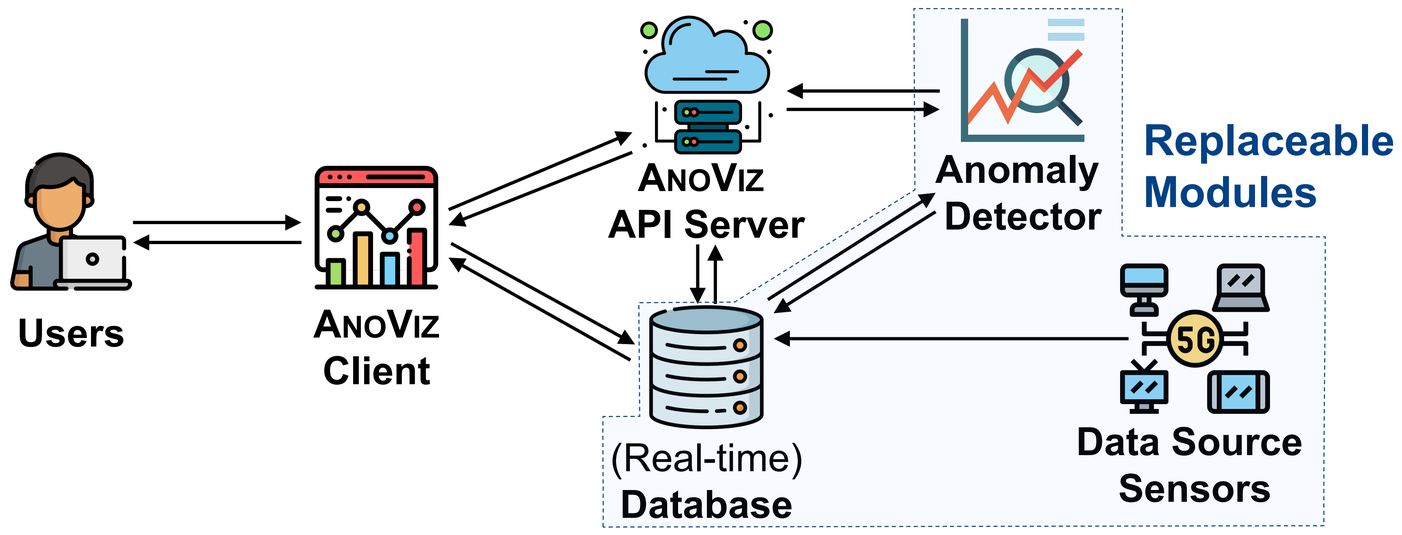
1. Motivation

Time-Series Anomaly Detection (TSAD)

- TSAD finds abnormal events of interest that need to be alerted for further investigation.
- TSAD is used for many practical applications (e.g., cyber intrusion, fraud detection, and medical analysis)

Existing System Limitations

- Few attentions have been given to visual inspection tools, limiting a deeper insight of the detection results.
- In practice, domain experts (or users) prefer to know which sensor/variable is the source of anomalies in the system rather than a simple quantitative performance of a detector to properly deal with the anomalies.

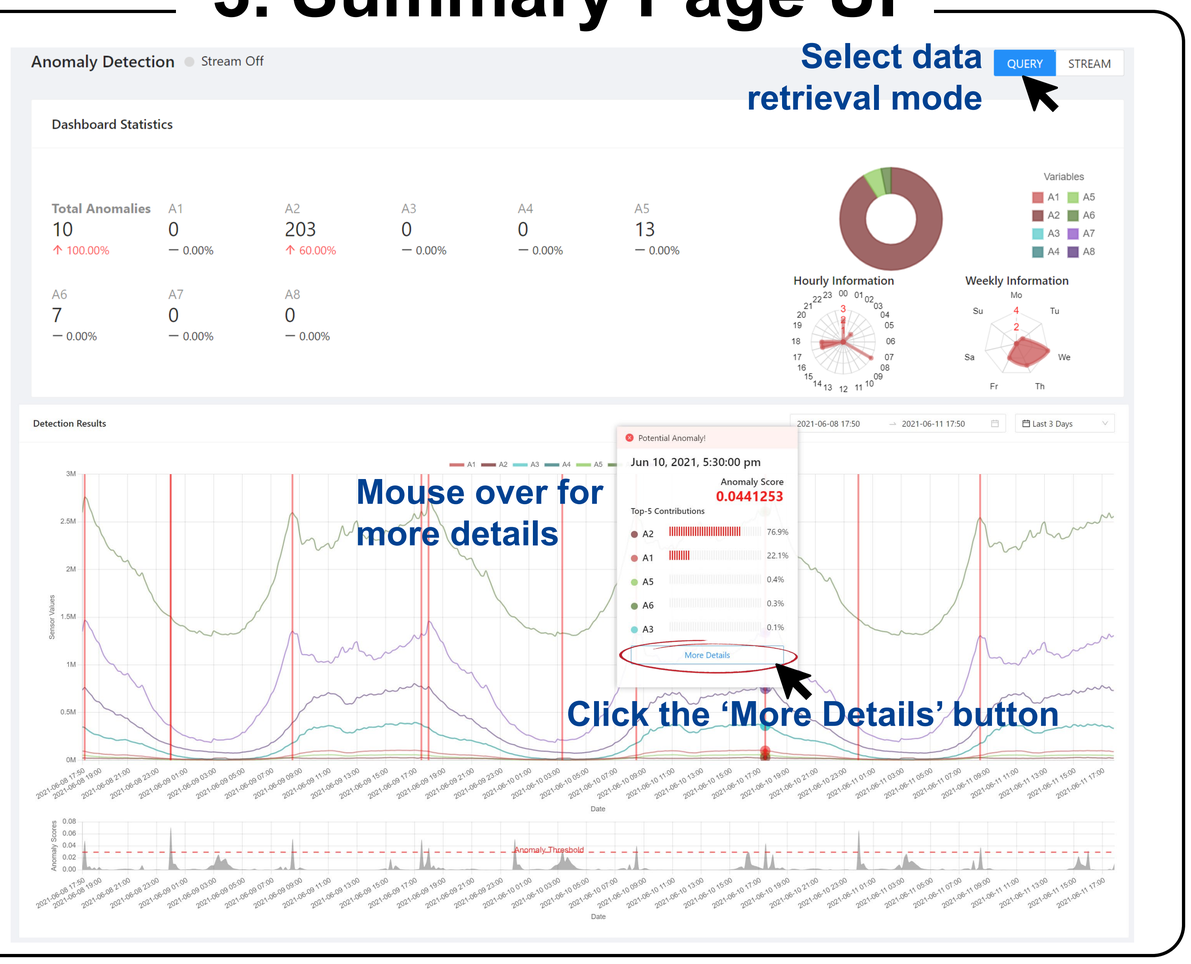


2. System Overview

ANOVIZ...

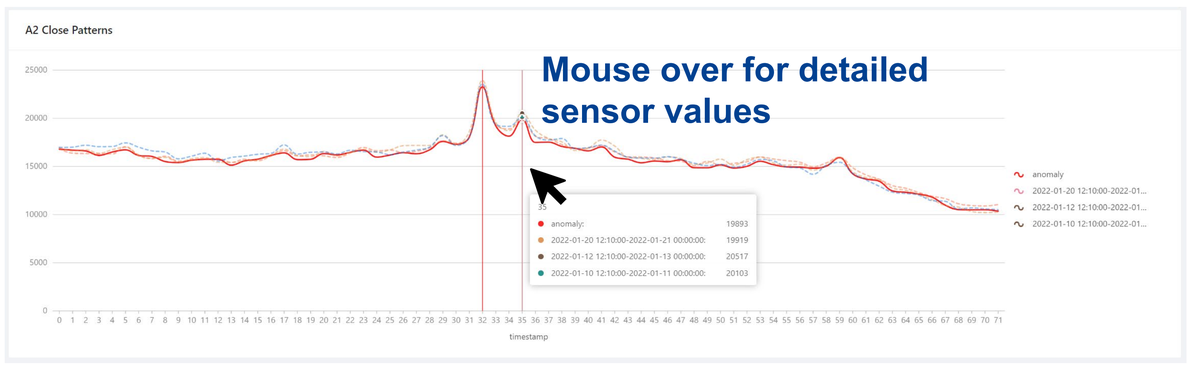
- offers example-based explanation through a rich set of user interfaces and visualizations.
- is a domain-agnostic visualizer that helps users find potential sources of anomalies in any domain.
- assists in-depth analysis in finding potential causes and gives user insights about anomalous instances.
- helps users qualitatively examine whether the current anomaly detector is of acceptable quality.
- provides both query and stream mode enabling users to analyze the results in near real time.

3. Summary Page UI



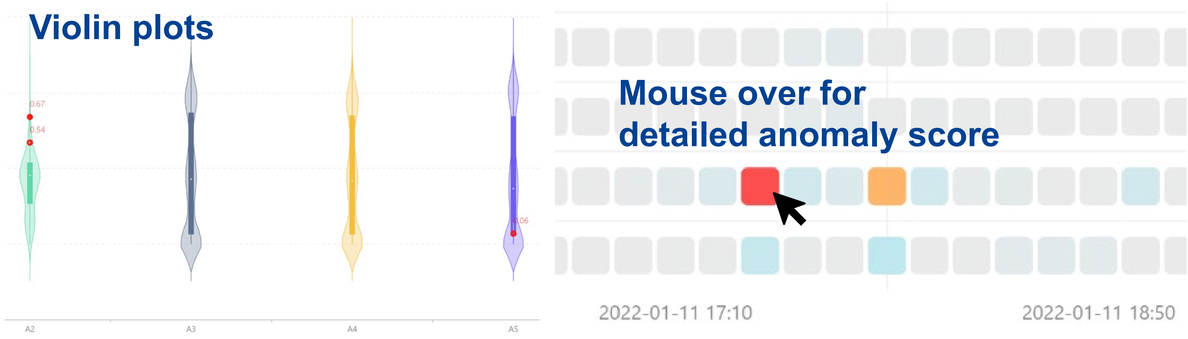
4. Detail Page UI

Close Patterns within Variable



Past Close Patterns

Possible Anomalies & Heatmap



Raw Anomaly Scores