

Internet Equity Initiative - Milwaukee Broadband Analytics Dashboard

The Internet Equity Initiative (IEI) is a research initiative within the Data Science Institute that focuses on producing data-oriented tools and insights to address Internet inequity. To illustrate device-specific network trends, the team developed interactive plots that aggregate measurement data from sensors deployed across Milwaukee and consolidated them into a single analytics dashboard that enables rapid exploration of current and future broadband performance data.

Clinic deliverables included four interactive plots - time-series measurements with customizable rolling averages, success-versus-failure counts, missing-data plots, and outlier detection. These plots were integrated into a working dashboard that accepts data from all IEI devices and supports selection of any specific device, measurement, and metric type. Figure 1 shows the unified interface and controls. Figure 2 demonstrates how the outlier-detection view, paired with the time-series plot, pinpointed a sudden shift in download speeds; further investigation suggested the household likely changed its Internet subscription. Together, these visualizations provide the IEI with an intuitive framework for communicating findings to community partners and for guiding future deployment decisions.

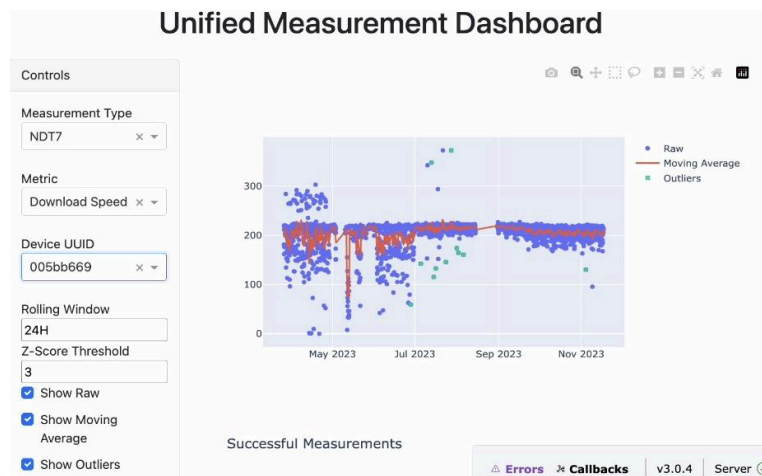


Figure 1: Unified Measurement Dashboard (Time-Series Plot & Controls)

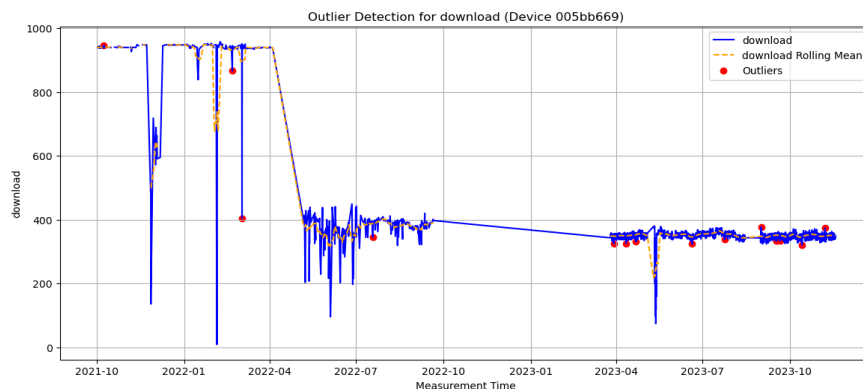


Figure 2: Outlier Detection Plot with Rolling Mean (Device 005bb669)