Internet Equity Initiative

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. The IEI has partnered with UChicago's Data Science Clinic to develop interactive plots for effectively communicating device-specific trends, which have been applied to data from devices deployed in Milwaukee. The plots can be consolidated into an analytics dashboard and applied to future data collected by IEI, therefore providing a means for convenient analysis.

Deliverables from the clinic team include four interactive plots and an analytics dashboard prototype. All plots accept measurement data from IEI-deployed devices and allow customization of device, measurement type, and metric type. Future work should focus on updating the dashboard such that all plots respond to the user interface and refining visual elements like color, typography, and white space to aid in efficient visual processing. The insights provided by our plots when viewed in tandem with the reproducible deployment-level report developed previously can help IEI examine general and detailed trends concurrently, supporting the mission of identifying where Internet inequity occurs and how policymakers should take reformative action.

The figure below highlights some of the valuable insights these plots can provide. The CDF plot shows a bimodal distribution of throughput measurements, which when investigated further using the time series plot allows us to pinpoint exactly when a change in Internet subscription may have occurred.