Seattle Transit Project

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Background 🚌

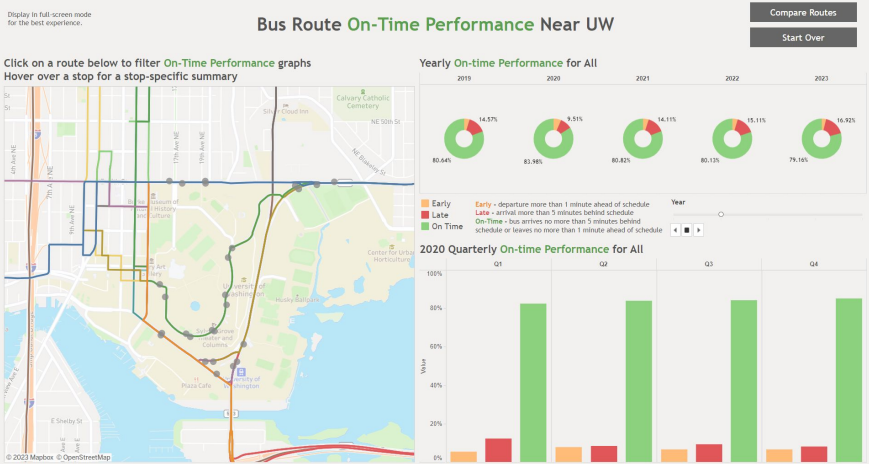
- Motivation
  - Get on the bus!
- Topic Concept
  - Understand historical on-time performance for buses that stop near the University of Washington
- Target Users
  - UW students who regularly take the bus
- Potential Usage & Goal
  - Help users examine historical on-time performance for specific routes and compare metrics between routes of their choosing
  - Explore the relationship between on-time performance and variables such as football games, time and day, and weather conditions

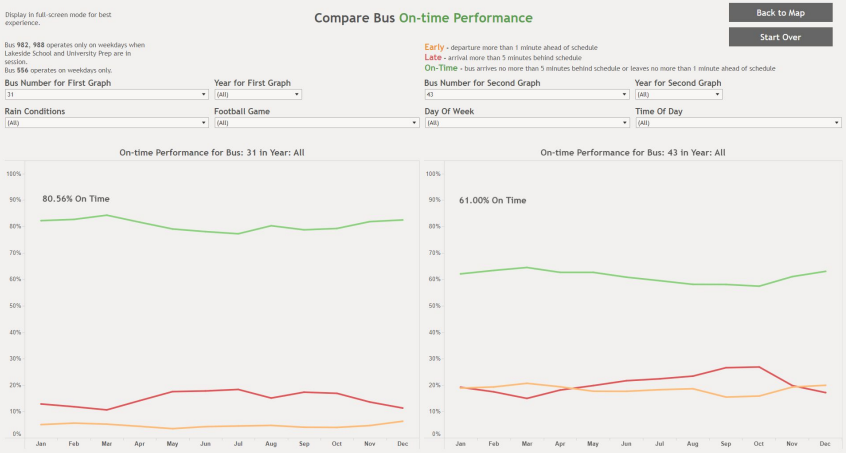
Data Process

- Data Collection
  - On-time performance by bus route, day of week, time of day (Source: King County Metro)
  - Geospatial bus route (Source: King County GIS Open Data)
  - Bus stops by route and geolocation (Source: King County Developer Portal)
  - Weather (Source: National Oceanic and Atmospheric Administration)
  - Bus schedule with frequency (Source: OneBusAway API, King County Open Data)
  - UW football game dates (Source: UW Football Schedule)
- Data Cleaning
  - Filtered bus route & stop based on proximity to University of Washington
  - Merged different sources in Tableau, using on-time performance data as a primary source

Demo

- Two ways to explore:
  - Overall map view with general on-time performance graphs
  - Comparison of selected bus routes with filters





Findings 🔎

- Notable Findings
  - Bus 43 has pretty bad on-time performance in general (either early or late)
  - Almost half of Bus 988 in 2021 were late
  - 73 has gradual improvement in its performance
- Limitations
  - Geographical limitation (stops and routes for UW area only)
  - Comparison limited to no more than two routes
  - COVID impact
    - Service changes and reductions for multiple bus routes
    - Limited events