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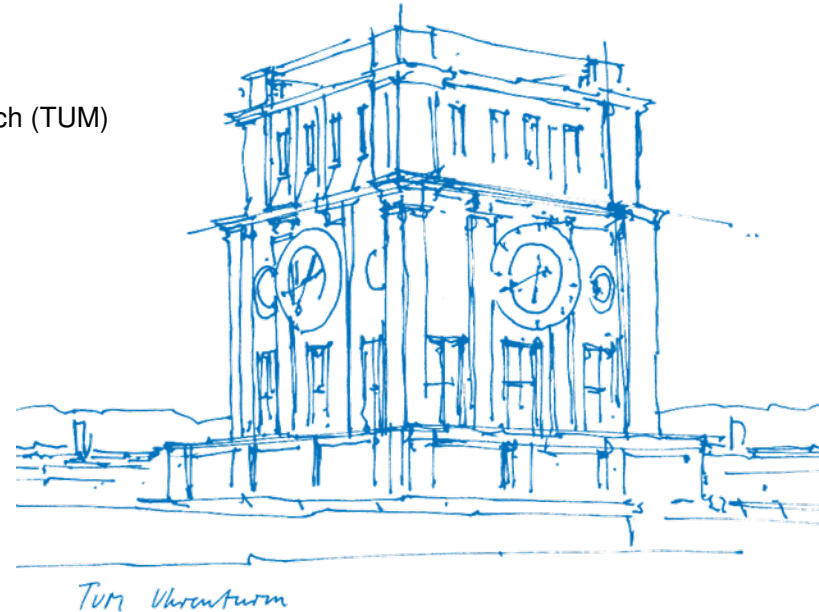Technical University of Munich

Towards a data-driven public bus operation: Monitoring bus door anomalies

Ilsu Kazkayasi

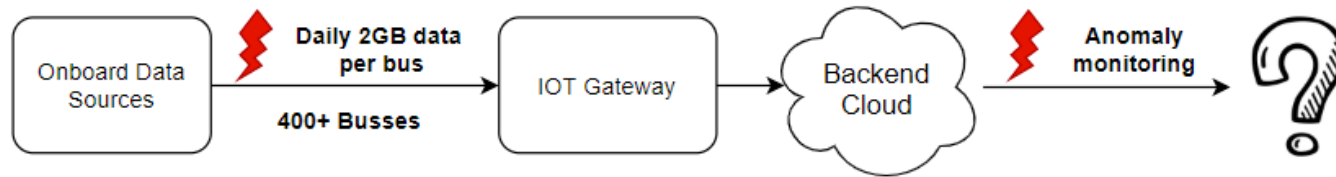 Department of Electrical and Computer Engineering, Technical University of Munich (TUM)
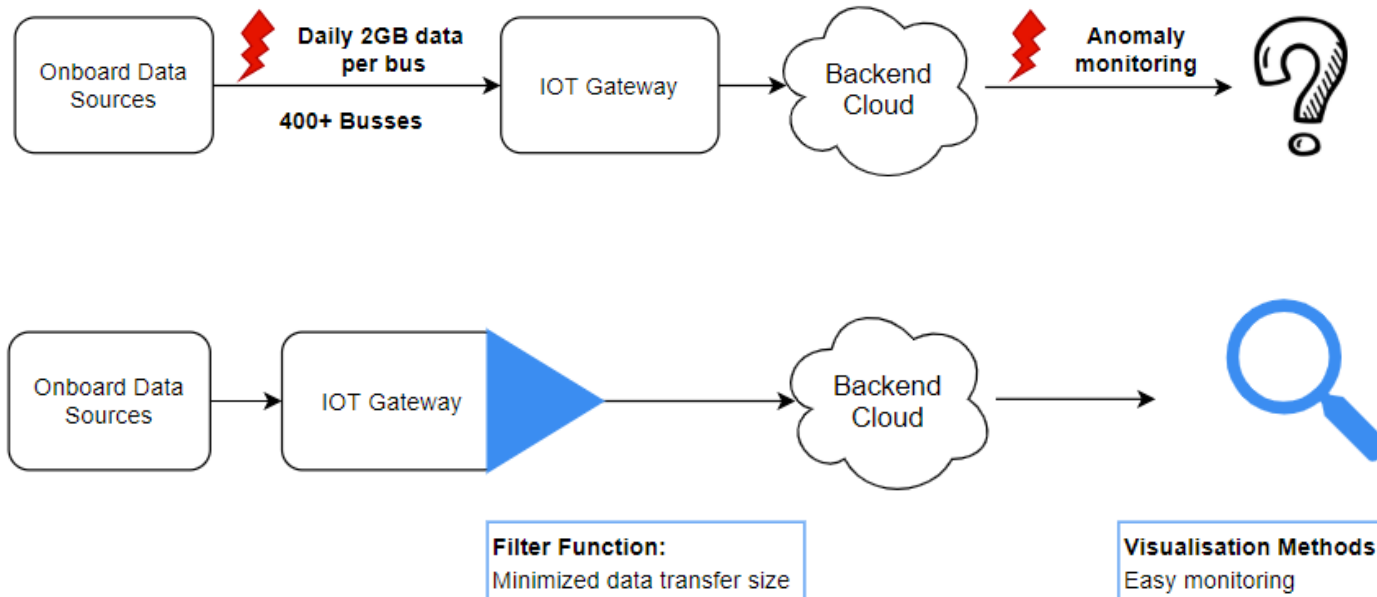
Research Internship Presentation - 23.10.2019

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Motivation

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Problem Statement

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Offered Solution

Overview

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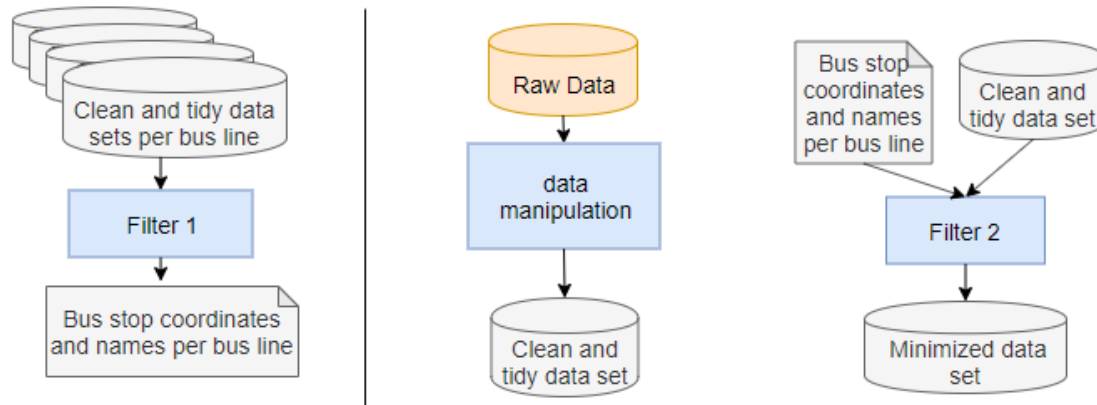
Outcome

Precise bus stop locations

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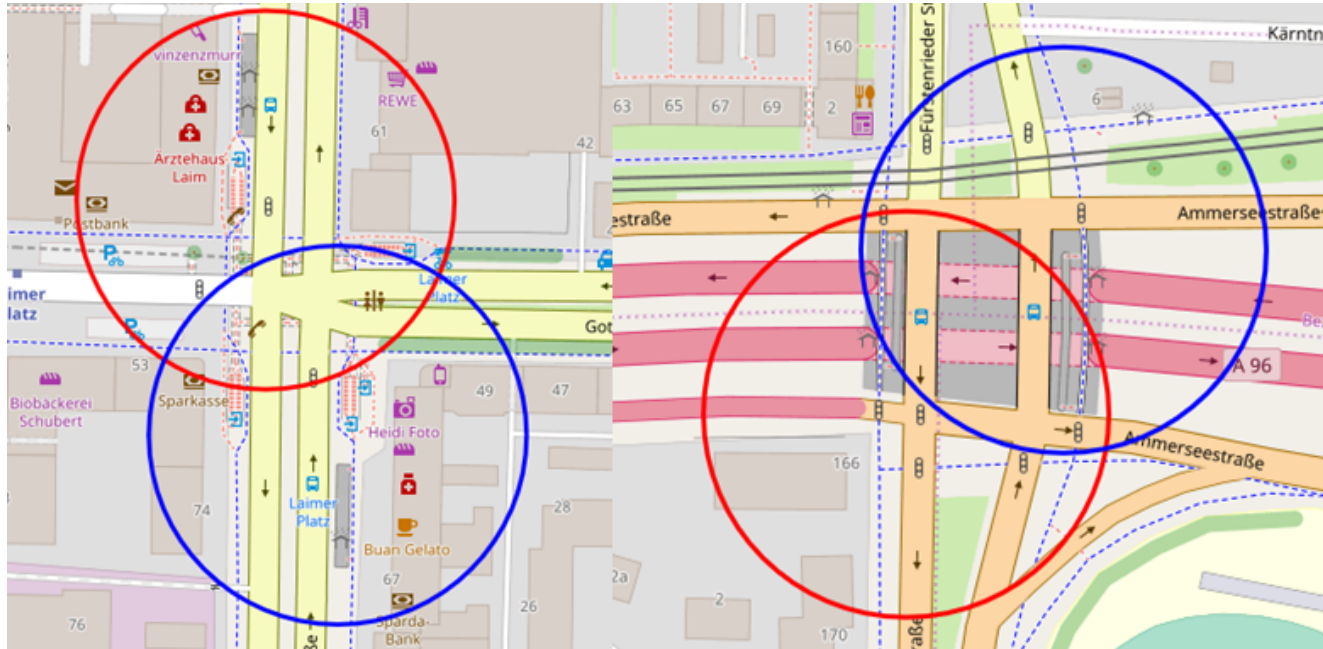
Outcome

Minimized data volume

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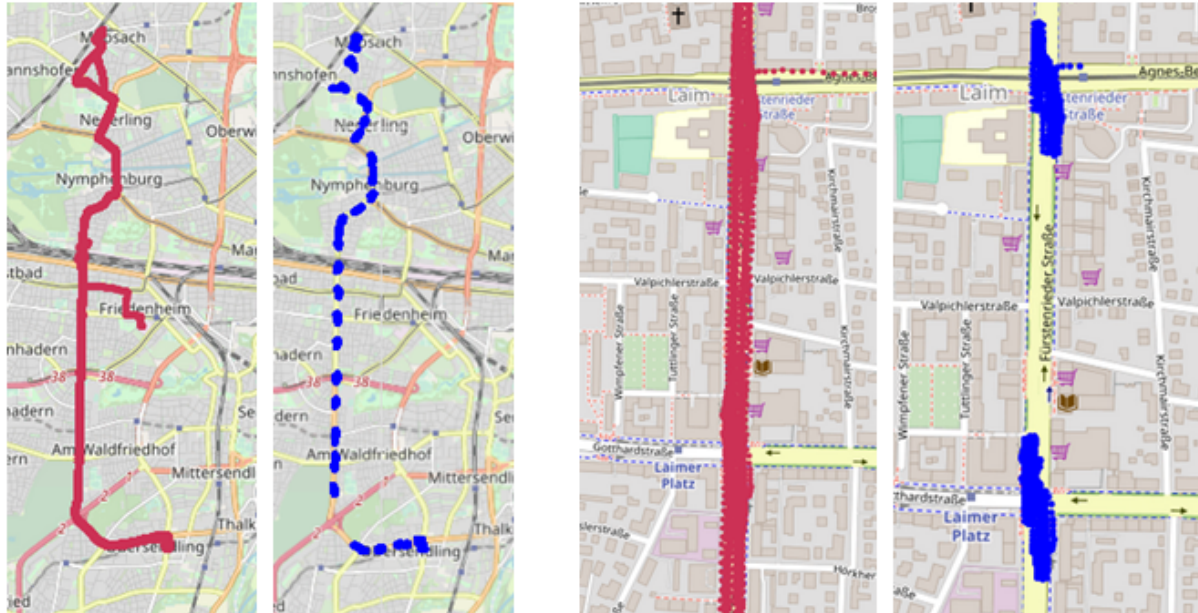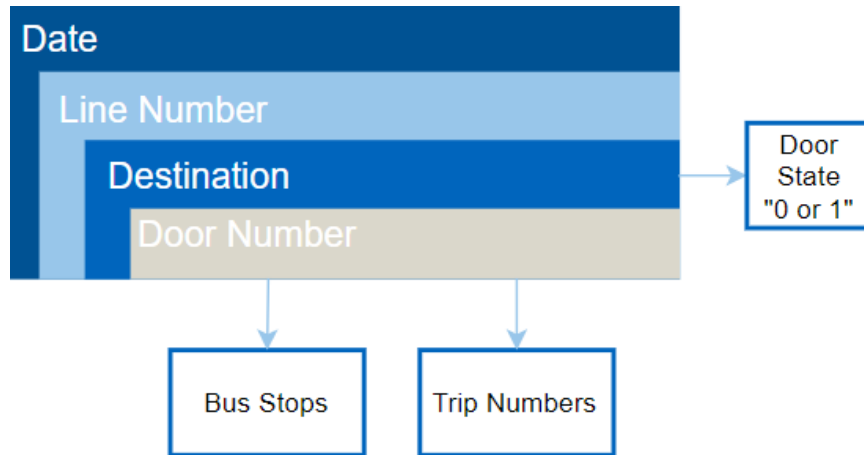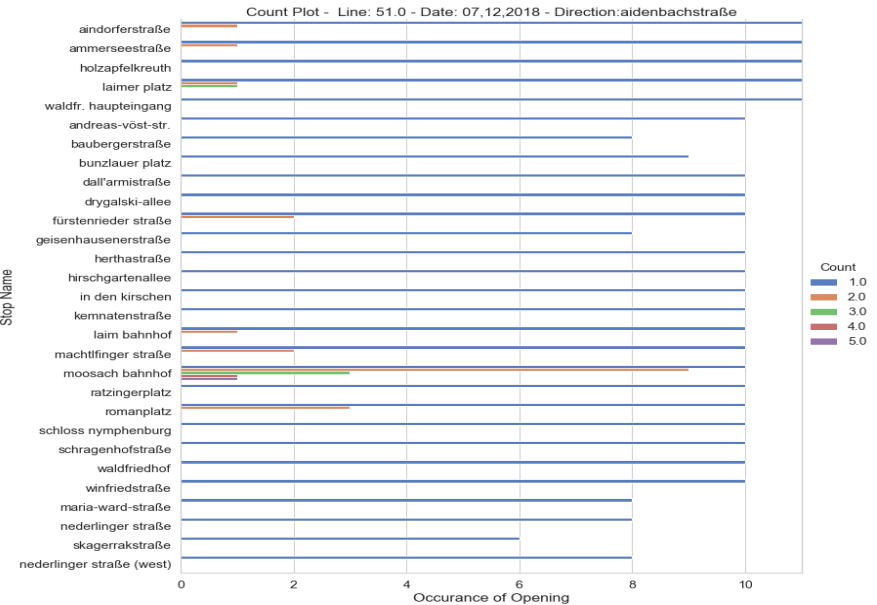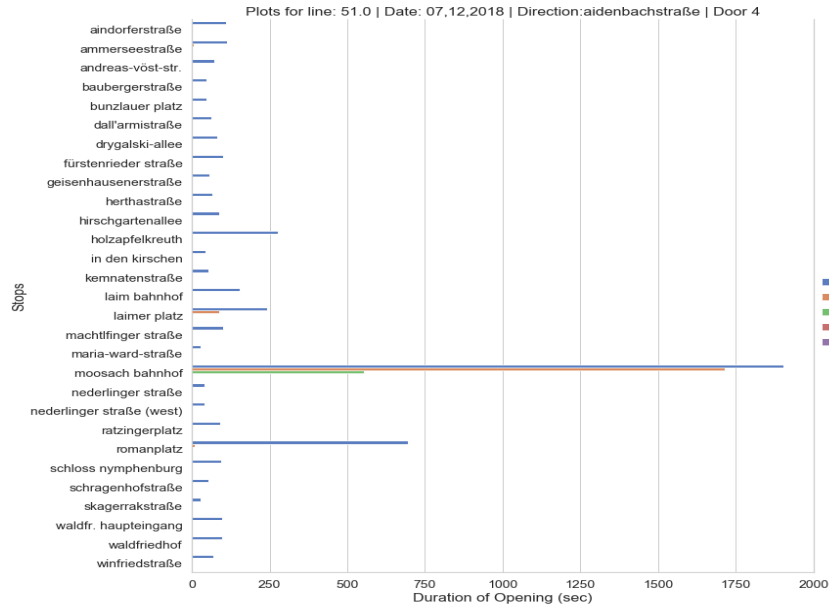
Offered Method for Monitoring

- Duration of Opening: How many seconds a door is kept open

- Occurrence of opening (Count): Index given to opening instances which occurred at the same stop.

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Results and Evaluation

Duration and Count Plots

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Results and Evaluation

Passenger Flow and Density Plots

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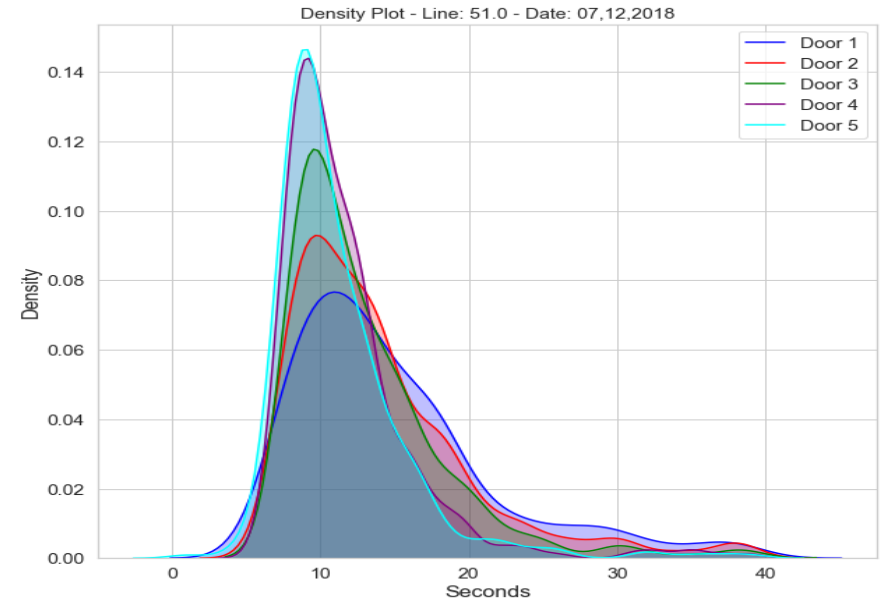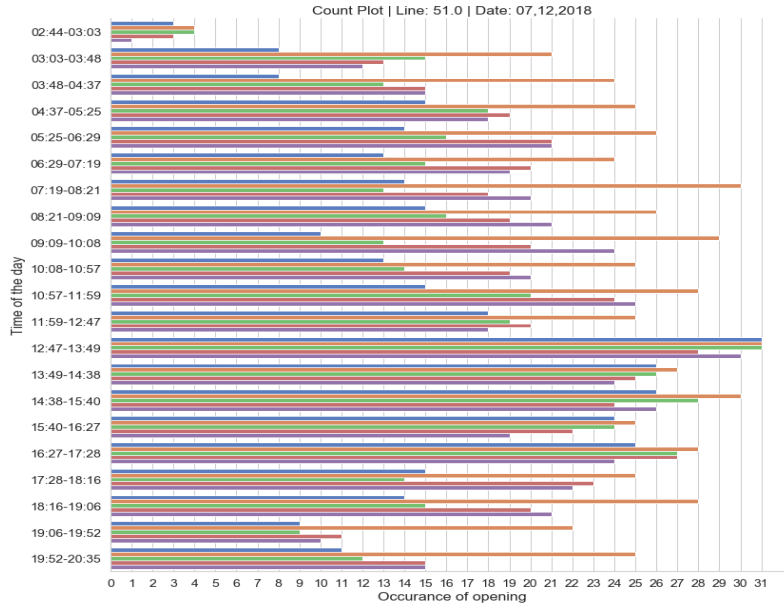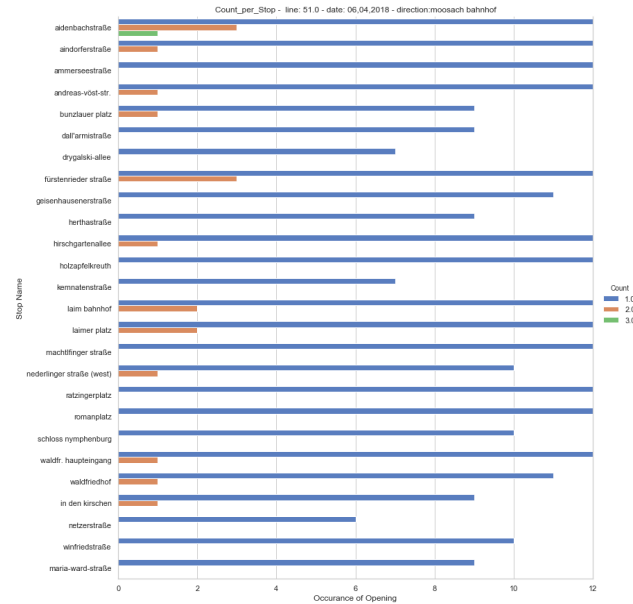
Summary

- A method is developed to obtain precise bus stop coordinates from the

  bus data itself,

- 1.2×10^{-4} times smaller data transfer size is achieved,

- Most important aspects for door anomalies are defined,

- Four different visualization methods are proposed.

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Back up

Minimized data volume

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Back up

Count_per_Stop - line: 51.0 - date: 06,04,2018 - direction:moosach bahnhof

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