

# 8. Behavior-Based Network Device Tracking

Michael Adam Polák

Faculty of Information Technology, Brno University of Technology, Czech republic  
xpolak31@stud.fit.vutbr.cz

## What is it?

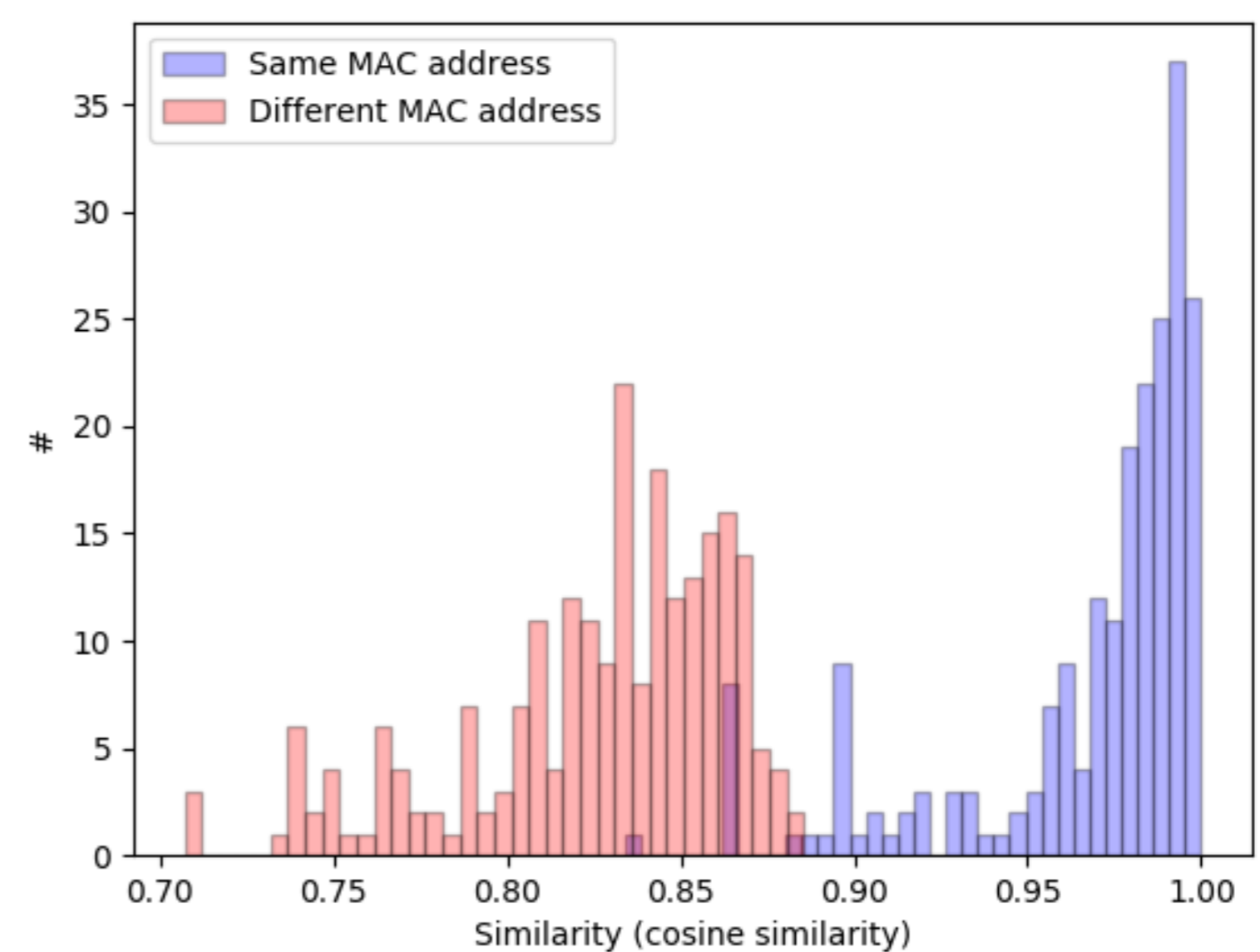
- Identification of network devices based on their behavior
- Tracking devices with sparse availability of features
- Passive approach with low time and spatial complexity
- High accuracy compared to currently used methods

## Is your device is anonymous?

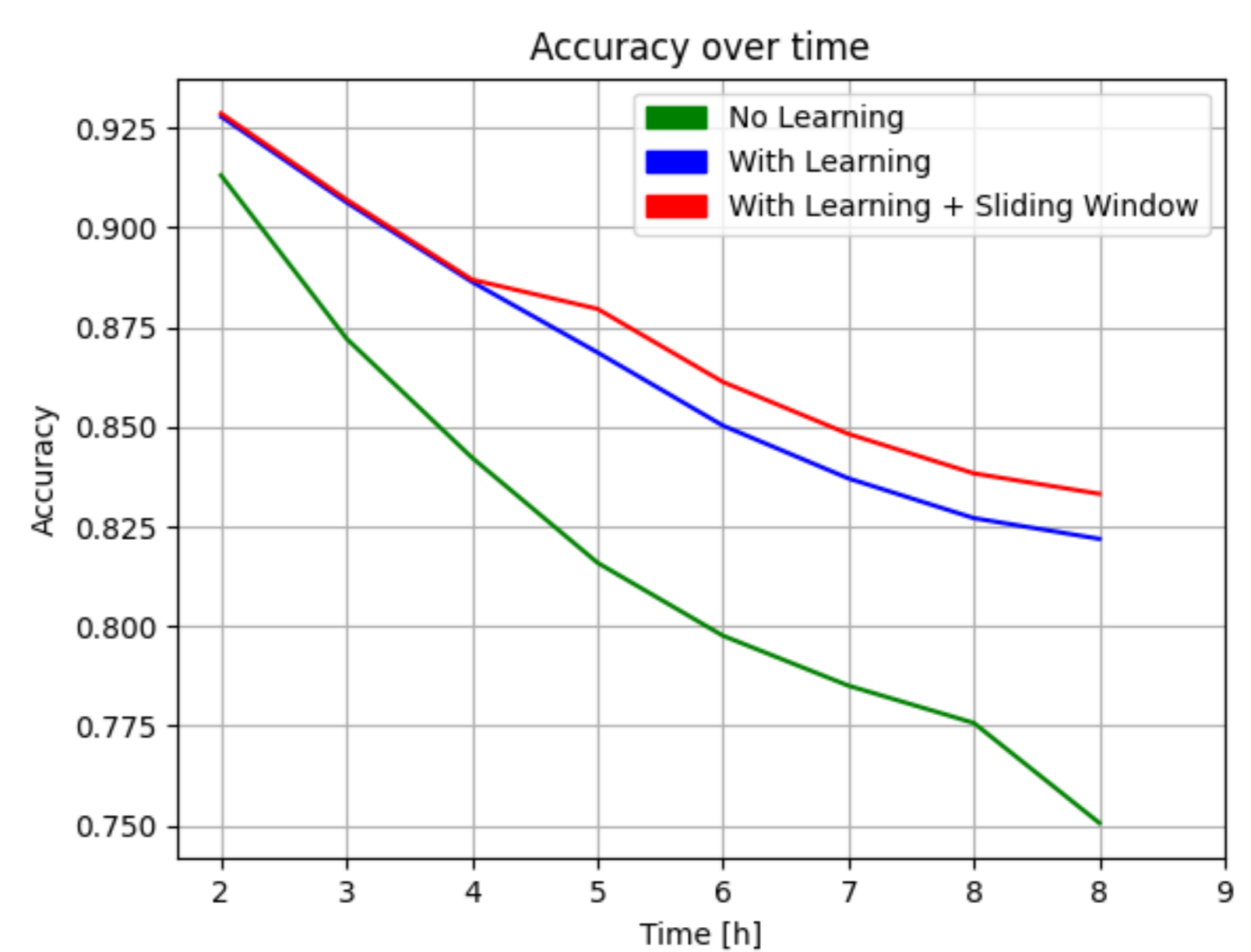


## Device Profile Similarity

- Similarity scores of devices with the same MAC addresses in blue and different MAC addresses in red
- Distinct separation of similarities between devices

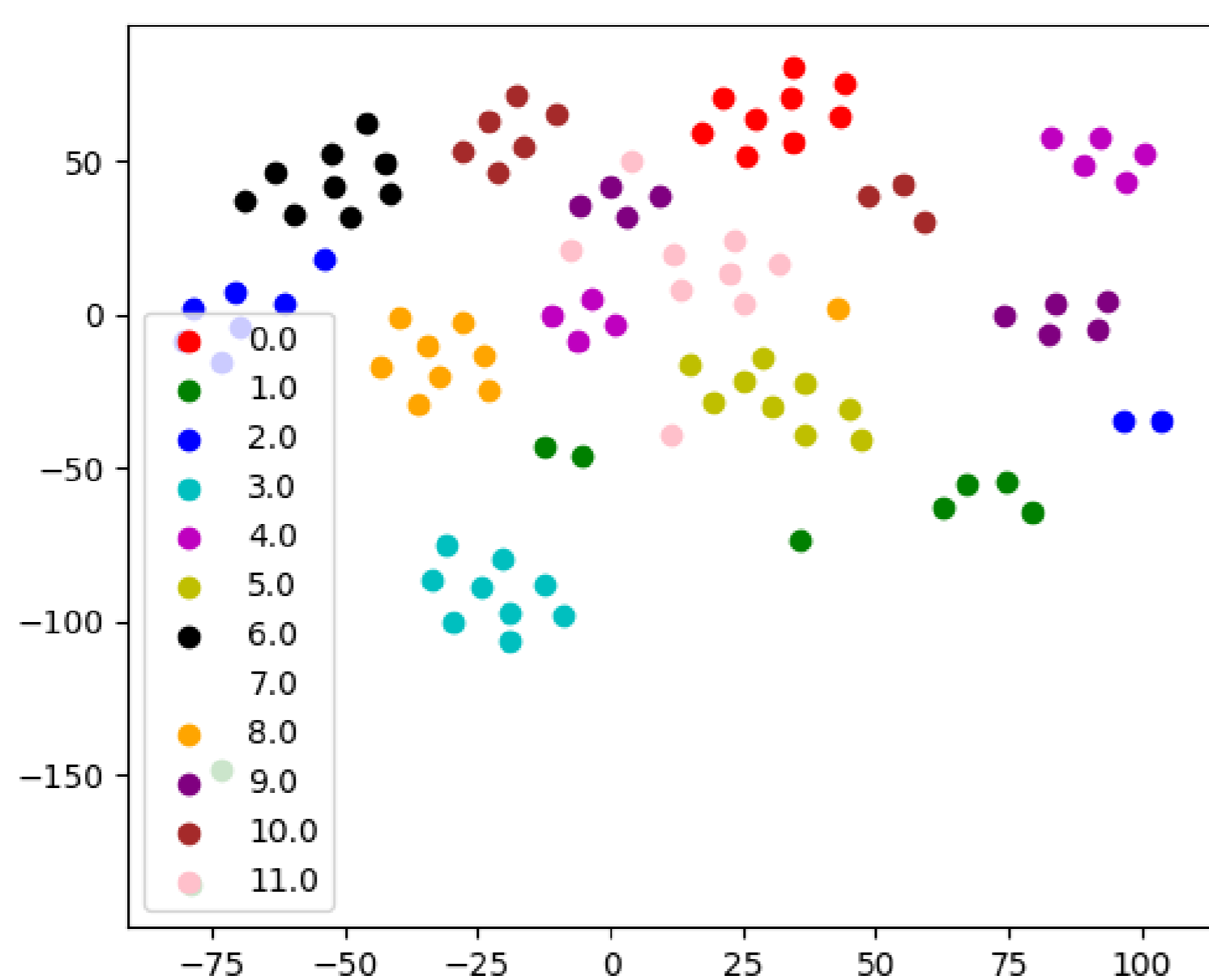


## Achieved Accuracy over Time



## Device Profile Distribution

- Profile distribution created with t-SNE, illustrating the clustering of device profiles



## Further Improvements

- Better Outlier Detection
- Parallelization