

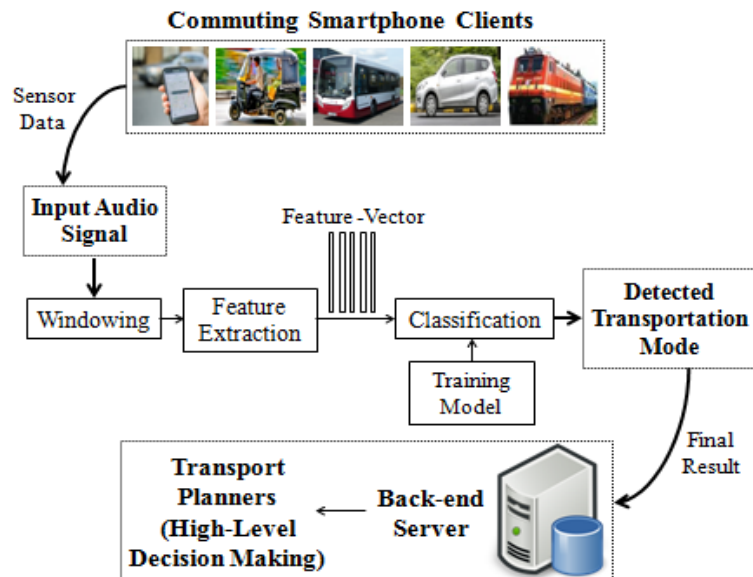
Transportation mode detection using cumulative acoustic sensing and analysis

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Problems & Ideas

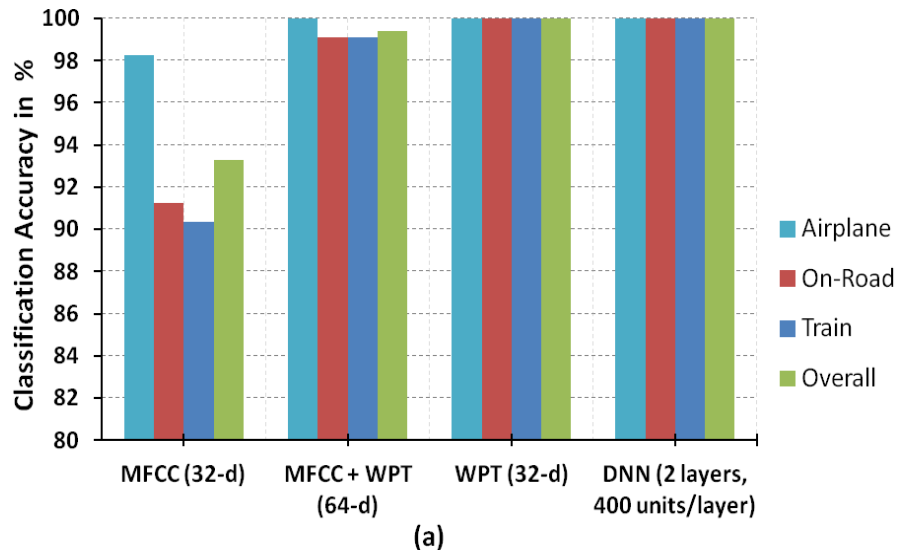
- Problems of Transportation Mode Detection of a commuter.
 - Mostly based on the usage of position sensors, motion sensors, or a combination of few sensors.
- Ideas: Proposed to use the ubiquitously-available low-cost microphone sensor of the commuter's smartphone and cumulative acoustic sensing.
 - Use of Deep Learning to improve the detection accuracy and robustness.



Results

Module 1:

- Airplane vs. On-Road vs. Train



Module 2:

- Auto-Rickshaw vs. Bus vs. Car vs. Pedestrian

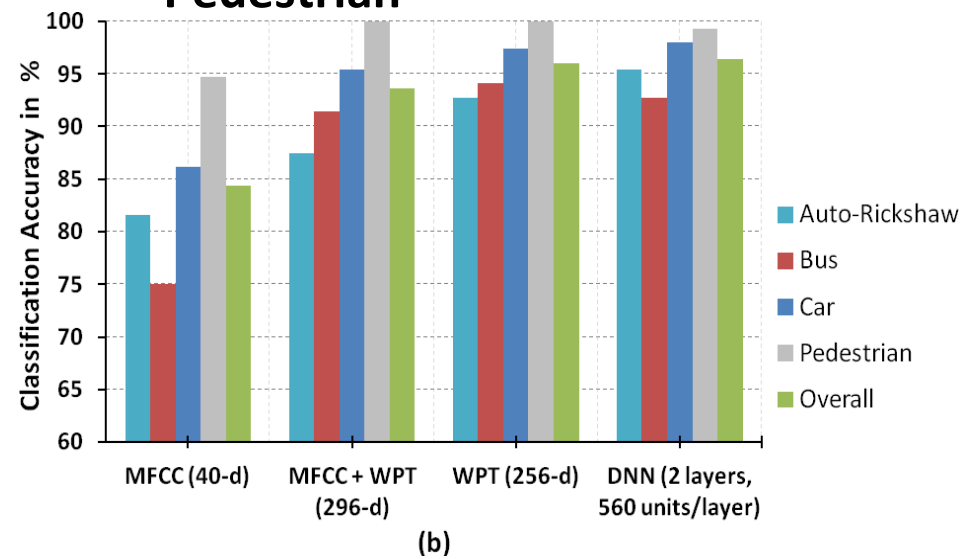


Figure 2: Transportation mode classification accuracy (in %) obtained for (a) module 1 and (b) module 2 using different techniques.