Transport Model for Commuter Trips

Mock-up for Bangalore as part of Fields of View task

Presentation for Decision-makers

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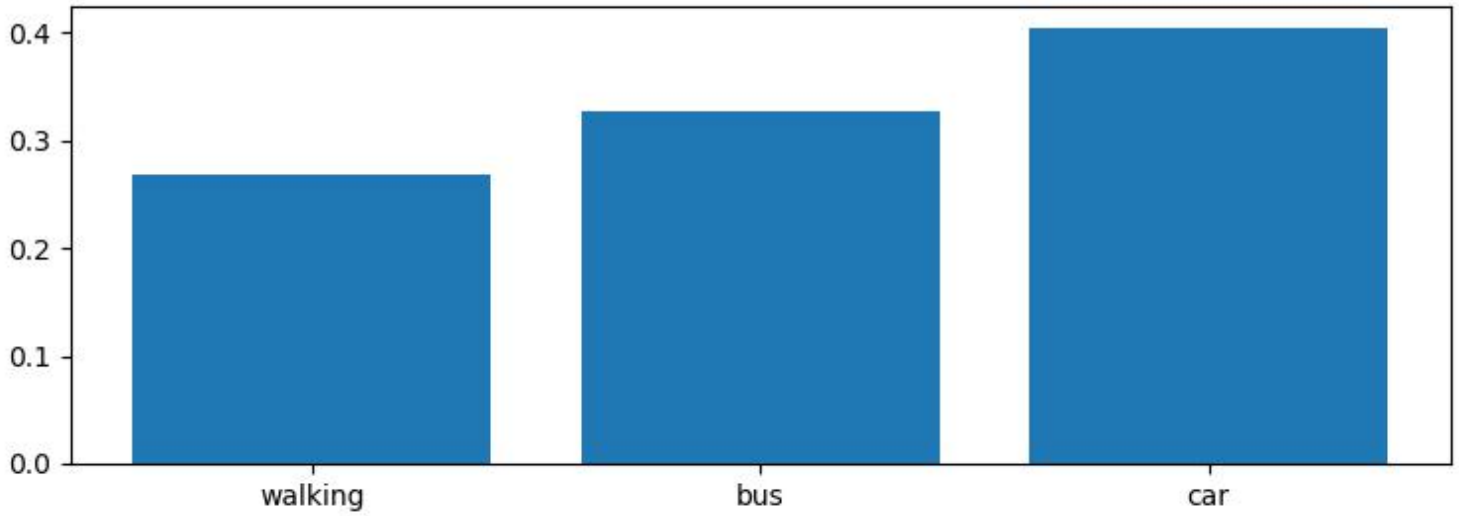
Model Description

- Four-step Transport Model for Forecasting
- Focusing on workers commuting from home to work location
- Model base scenario and compare with:
  - better public transport accessibility
  - traffic disincentivisation measures
- Aim is to understand how transport plans that can help:
  - increase active travel (public transport, walking, cycling, etc.)
  - reduce traffic congestion (lesser non-mass transport trips)

Scenario 1: Base Scenaro

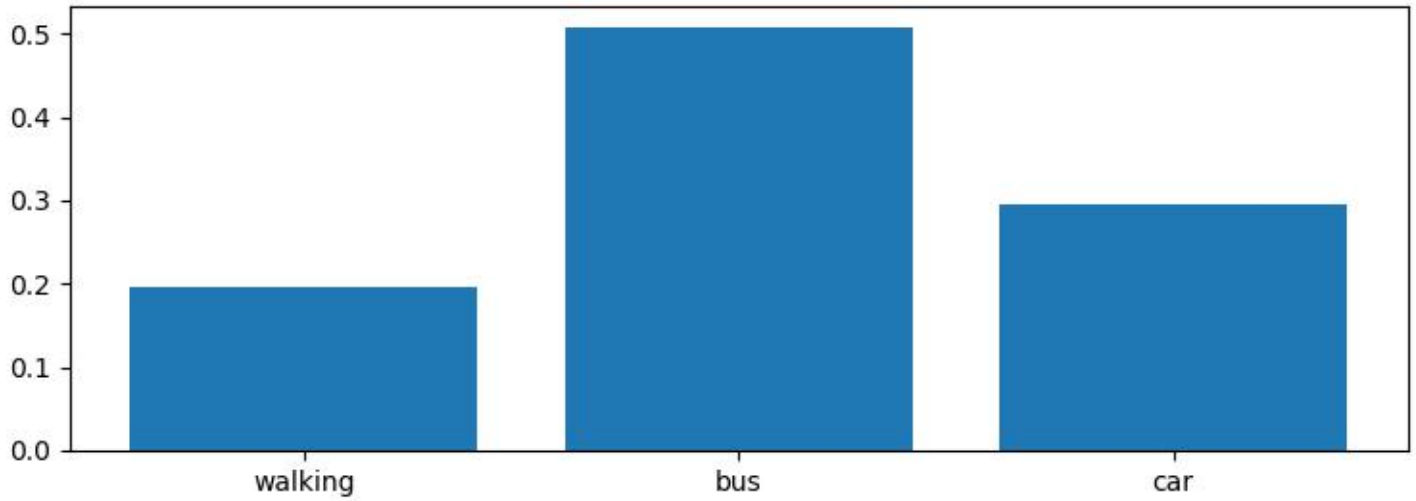
- Looks at current challenges with different modes
- Ignores vehicle ownership
- Model result determines by “ease of mode”
- Modal split (below) shows preference linked to ease
- Unsustainable, as resources required for satisfyind demand unavailable



Scenario 2: Flat Fare for Public Transport

- Currently, public transport fares in Bangalore are dynamic (i.e. dependent on distance)
- This scenario looks at a flat fare (e.g. Rs. 10)
- Trade-off between potential increase in ridership vs operation costs of transportation system

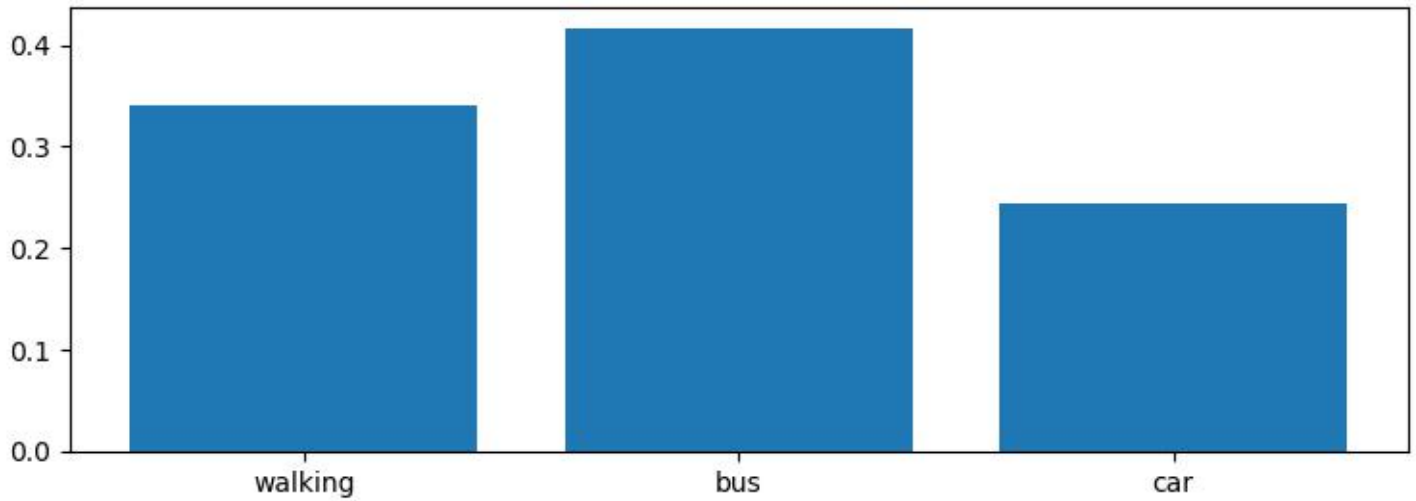
- Modal split (below) shows huge uptake of buses
- Also, reduction in car trips adds an advantage to existing trade-offs
- Results seem to indicate reduction in walking as well, but this doesn't take into account the "walking" mode as part of "bus" modal choice



Scenario 3: Congestion Pricing

- As seen in Base Scenario, cost of usage for “car” mode in the network is low
- This scenario looks at “congestion pricing”, i.e. additional charges on cars for entering certain zones/wards
- Flat congestion charge (not linked to distance)

- Modal split (below) shows increase in walking and bus trips
- Obvious reduction in car trips adds an advantage to existing trade-offs
- Reduction in car trips is more compared to Scenario 2, could be linked to difference between short and long distance trips



FUTURE ROADMAP

- Identify wards with high throughput of traffic and model “congestion pricing” on only those zones
- Assignment of routes for each mode based on road network
- Factor in vehicle ownership and other demographics details to better model trips and mode choice
- Link modes, trips with environmental factors to better understand air quality, noise, etc.

THANK YOU