A Project by Swathi, Arumugam and Nishka

BUSy

Why

- Exercise in environment design

- Capture real life interactions between the various components of our game

- Inspire children to take up roles in better management of resources

- We hope that with time, this environment can also be used train a Q learning agent to optimize bus planning in NTU and across the country

Approach

- Number of buses player adds increases fuel cost
- Number of people waiting increases social cost
- Buses and bus stops with max capacity increases social costs
- Goal of the player is to minimize these costs
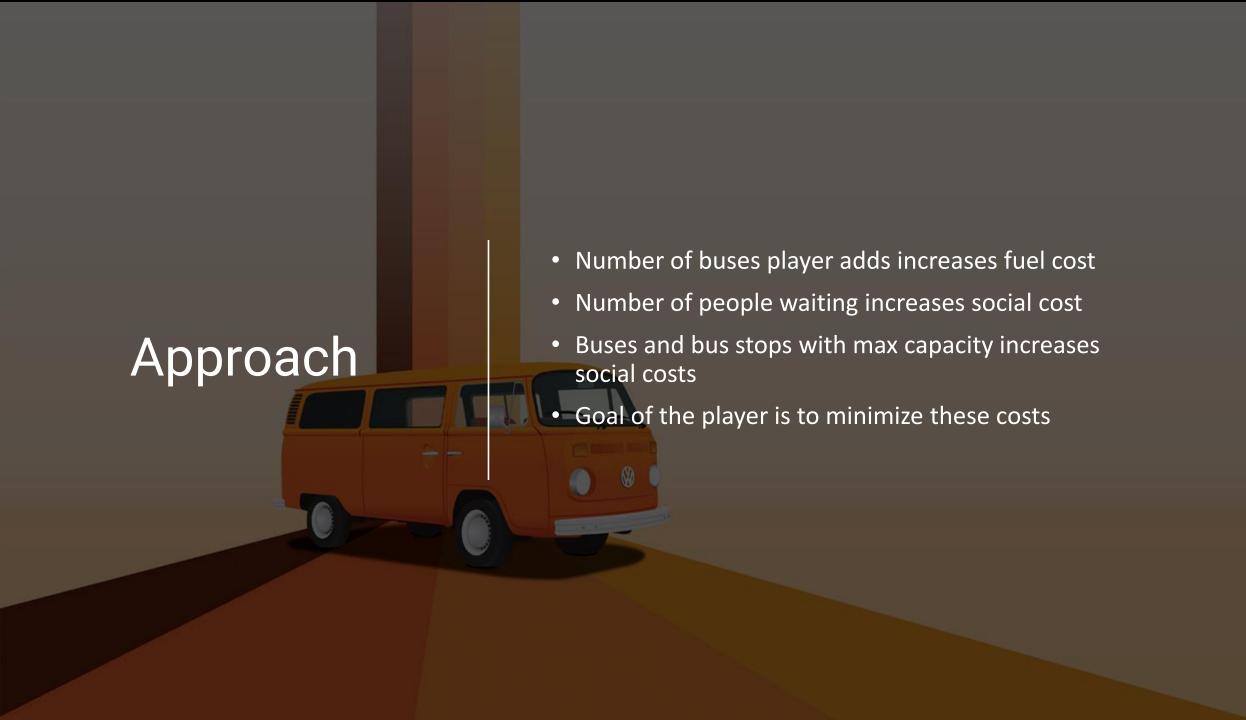
Methods Used

- Pygame for the visualization
- Please refer to this link for a detailed view of game mechanics

Impact & Scope

- This game will help the user visualize the difficulty in solving the optimization problem revolving around scheduling of buses

- The final aim of this project is to

  -help people reduce the amount of fuel used and subsequently, the carbon footprint

  -reduce waiting time and inconvenience caused to students and NTU faculty