


# The Bengaluru Last Mile Challenge, 2025

## Challenge overview

Bengaluru has been figuring in the top ten most congested cities in the world in terms of traffic for several years now. One of the ways to address this issue is to provide an easily-accessible, affordable, efficient, and sustainable multi-modal public transport system. This hackathon is aimed at creating broad awareness about multimodal transportation options leading to innovative solutions to the mobility problem in Bengaluru. This hackathon is being co-sponsored by the **Bengaluru Metropolitan Transport Corporation (BMTC), Namma Yatri, the Centre of Data for Public Good (CDPG), and the Centre for Infrastructure, Sustainable Transportation & Urban Planning (*CiSTUP*) of the Indian Institute of Science (IISc).** It will be hosted by IEEE DataPort.

The hackathon will start in the last week of August 2025 and the submissions will be evaluated in the first week of October 2025. The participants will be provided with live location data of a large subset of Bengaluru Metropolitan Transport Corporation (BMTC) bus routes for a period of three weeks, the corresponding bus stops along with their locations, as well as information related to Namma Yatri autorickshaw availability and road-segment speed information for the same period. The participants are allowed to use additional sources of publicly-available data (such as weather) as well. The task consists of three problems:

Problem 1: Given the live location of buses of a set of routes up to time '*t* on a particular day, predict the arrival time of these buses at various bus stops along their routes up to the end of the route.

Problem 2: Predict the time required to travel between specified pairs of locations in an autorickshaw for departures falling between time *t* and time *t* +1 hour.

Problem 3: Predict the total time required to complete a multi-modal journey, which may use a combination of bus and autorickshaw travel.

The main challenge lies in modelling the uncertainties associated with bus travel times and the availability and waiting time for autorickshaws. The submissions will be ranked on the basis of how

well the predicted times match the actual times for a given number of test cases. The organizers may set up a leader board to help the participating teams evaluate their intermediate solutions.

Based on how the submissions score on a separate test dataset, five teams will be selected for the final demos at IISc. The demos will be scored by a team of judges, and the hackathon will conclude with the demos by finalists on October 13, 2025, and the announcement of winners on October 14, 2025 in conjunction with the Symposium of Data for Public Good at IISc.

The hackathon will be conducted by an organising committee with members from the Centre of Data for Public Good (CDPG), IISc, and the Centre for infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), IISc, with help and advice from the Bengaluru Metro Transportation Corporation, Namma Yatri, and other industry partners. The organising committee may interact with the participants via periodic virtual meetings or an online discussion forum to address any questions or concerns they might have regarding the detailed description of the hackathon and the rules and regulations.

**ENTRY IN THIS COMPETITION ASSUMES YOUR ACCEPTANCE OF THE FOLLOWING OFFICIAL RULES.**

## Eligibility

Each team may have up to five members. An individual can be a member of only one team. All members of a team need to be residents of India. If the team is selected as a finalist, at least one of the team members must be physically present at the conference venue to demonstrate their solution.

## Rules of Participation

All teams wishing to participate must sign up for the competition on IEEE DataPort. Each team is allowed to create only one account. Privately sharing code or data outside of teams is not permitted. There are also restrictions on data access and usage as described in detail below. Only one submission per team is allowed. If a team makes multiple submissions before the deadline, the last one will be considered. The same team cannot make submissions from multiple accounts. Team mergers are allowed before the submission deadlines, as long as the total number of members in the merged team does not exceed five.

## Data Access and Use

**The data provided will be only for use within the competition.** The participants give an undertaking that the data will not be used for any purpose other than the hackathon. The participants also must not try and reveal any personally identifiable information present in the data. In addition, participants must not place this data in the public domain.

## Source Code and Publications

The participating teams can make use of any open source code or software in building their solutions, provided such use is permitted by the owners of the open source code. The participants are free to publish their algorithms, methodologies and other findings in the form of articles. However, they must clearly acknowledge the hackathon in their publications.

All participating teams will be expected to make their source code available to the evaluation committee for scoring purposes. We expect that the algorithms and insights that are generated out of this hackathon will be applicable at a larger scale for the entire city of Bengaluru, and with

enhancements and inclusion of other data sets, will help agencies providing public transport design a reliable multimodal transport model for Bengaluru and other cities in India. Therefore, in the interest of the larger public good, we expect the finalists of the hackathon to make their code open source at the end of the competition (i.e., after the prizes are announced), under Apache 2.0 licence. However, they must maintain the data that is shared as private.