RidePooling for future – optimizing the route for private ride sharing in cities and surrounding areas

Project context
In the light of the increasing need for a more sustainable and eco-friendly society, there is a stronger focus on new possibilities and technologies for passenger transportation. With commercial providers such as MOIA, CleverShuttle, BERLKönig or MVG IsarTiger, one can find new concepts like carsharing or ridepooling to travel flexibly for little money, especially in metropolitan areas in Germany. As regards the private use in day-to-day life, the available open source solutions (e.g., route planning via google maps) still have potential for improvement. In order to plan a mutual weekend trip outside from the city, one has to face the challenge to find a short route for the driver as well as suitable pickup locations along the available path(s) for the other passengers.

Your objective
The goal of the IDP is to create an “easy” solution for route planning with several stakeholder, a driver and passengers for private use. Initial situation is a specific number of people allocated in different places of the city, who are to be fetched along the “best” route. In addition the solution can also include other influencing factors such as the current traffic situation or the available transportation modes (walking, cycling, public transportation, etc.). You will analyze already existing route planning tools and optimization methods and algorithms, evaluate the important viewpoints (e.g., shortest route for the driver, quickest route overall, cheapest route overall…) and carry out a rating of the influencing factors. You will develop a tool, that enables you to find the best route for the driver as well as the passengers.

Your profile:
- You are interested in finding better solutions for your daily life (ridesharing, etc.)
- You are proficient in English and/or German
- You work in a structured, independent and diligent way
- You do not need any existing background in logistics or supply chain management
- You maybe think, there is an even better way to optimize the “rout planning problem” as suggested

If you are interested in this IDP, send a short motivation letter, transcript and CV to
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