Impressions of the TRB Conference

From January 5th to 9th, 2025, I participated in the **TRB (Transportation Research Borad) conference**, one of the largest and most significant transportation conferences in the world. Held annually in Washington, D.C., the capital of the United States, the event attracts thousands of participants from around the globe. The conference is divided into several key components including poster sessions, which take place three times a day and last about two hours each, lecture sessions covering a variety of topics organized under umbrella themes such as 'Electric charging efficiency,' and community meetings hosted by the TRB organization, which are also categorized by professional subjects. This event provides a unique platform for learning, knowledge sharing, and connecting with experts in the field.

During the conference, I was interested in two main content areas: posters that dealt with reinforcement learning and innovative models in the field of transportation, and lectures that focused on assessing pollution caused by autonomous fleet vehicles because of the use of advanced algorithms and advanced technologies. In both subjects, I found a wealth of diverse and fascinating information. For example, I was exposed to a study that dealt with the impact of lane changes on electricity consumption, and to an experiment conducted in Italy that tested a credit system for charging electric vehicles. The system served as autonomous infrastructure and was designed to engineer driver behavior, to ensure the correct distribution of charging stations and keep them free for autonomous infrastructure. In the field of reinforcement learning, I saw how the method integrates with various transportation simulations – from medium-scale for managing a small fleet of vehicles to simulations at the level of a single vehicle. Since I focus on large-scale simulations, I was pleased to see that very few studies integrate reinforcement learning at this level, which strengthens the value of my research and emphasizes the need to bridge the existing gap in the field.

Personally, I was a co-presenter of two posters presented at the conference, one of which I led and presented myself. The poster session provided significant exposure for my research, thanks to the high traffic at the conference – it was the most exposure I have ever seen compared in similar sessions at conferences. My project is about reinforcement learning and exploring how demand forecasting can be used to make large-scale fleet operations more efficient. The second study I was a co-presenter of is a simulation of the Beep service in Orlando, which was conducted by PhD student Sudipta Roy from the University of Central Florida. In addition, posters were presented by researchers I know and have professional connections with the JRC, the leading scientific organization of the European Commission. They presented about 6 posters that focused on the AMoD regulation of advanced services and studying their impacts on everyday life.

The conference also includes an exhibition showcasing a wide range of transportation companies, from autonomous vehicles to delivery robots and drones. Several Israeli companies from Tel Aviv also participated, adding to the diversity of the exhibitors. The exhibition serves as a central hub, drawing participants to gather and network between poster sessions and presentations.

In addition to the exhibition, many receptions are organized by these companies across Washington, offering excellent opportunities for transportation professionals to build social and professional connections. I highly recommend attending these events to anyone planning to participate in this conference. The only drawback to the conference is its relatively high cost, which includes expenses such as airfare to the United States and the $400 student participation fee, So I would like to take this opportunity to express my gratitude to the **ISRC** for funding my trip to this exceptional event.

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