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Nippon Koei Latin America-Caribbean Co., Ltd.
☐Address：5-4, Kojimachi, chiyodaku, Tokyo, Japan
☐Employees：236 members
☐Established in：2003/7/1
☐Business：Engineering consulting

Nippon Koei Co., Ltd.
☐Address：5-4, Kojimachi, chiyodaku, Tokyo, Japan
☐Employees：6,163members (Consolidated)
☐Established in：1946/6/7
☐Business：Engineering consulting

Project Name

Artificial Intelligence for traffic monitoring and road inventory

Cooperation with Local Companies

- Mobility secretary (Bogotá): District government entity that formulates policies and implements multimodal mobility strategies
- Medellin Metro (Medellin): public entity that provides the massive transportation service in Medellin, as also consultancy in transport systems
- Engineering Center for Research, Development and Technological Innovation (CIDIT, Asuncion): is a Technological Development Center, created in 2015 to have an entity in Paraguay that articulates the supply and demand of science and technology (R+D+i) for the engineering sector and synergies between companies, the public sector and academia in order to support the processes of technological development, research and innovation.

The expected business model is to offer a consulting service to local authorities and private companies in charge of transportation studies and road maintenance, that includes:
-Data collection using video recording
-Video processing using Artificial Intelligence to obtain vehicle counting, train and metro station occupations or road inventory, according to each case
- Report with results

Local Economic / Social Issues

The transport sector is key for the economic development. Efficiently working transport systems provide economic and social opportunities and benefits that lead to positive multipliers effects such as better accessibility to markets, employment, social services, enhanced cost and time savings, lower price for commodities, increased competitiveness, and additional investments.
Also, road network in some cities is currently deteriorated and the resources for its maintenance and rehabilitation are limited. The status inventory is a manual process that requires an important number of human resources and time to carry it out.

Details of Demonstration

The methodology that will be applied is based on object detection algorithms, using programming language "Python". Object detection is commonly associated with self-driving cars where systems blend computer vision, LIDAR, and other technologies to generate a multidimensional representation of the road with all its participants. It is also widely used in video surveillance, especially in crowd monitoring to prevent terrorist attacks, count people for general statistics or analyze customer experience with walking paths within shopping centers.

Expected Outcome in the future

- Automate the field data collection using video recording.
- Reduce the associated costs for data collection by reducing manpower for the survey.
- Provide information for decision-making related to traffic policies, traffic management plans, as well as for traffic studies such as microsimulations, to evaluate the results of traffic improvement scenarios