NARLabs
國家實驗研究院

Smart City: AIOT for Urban Science

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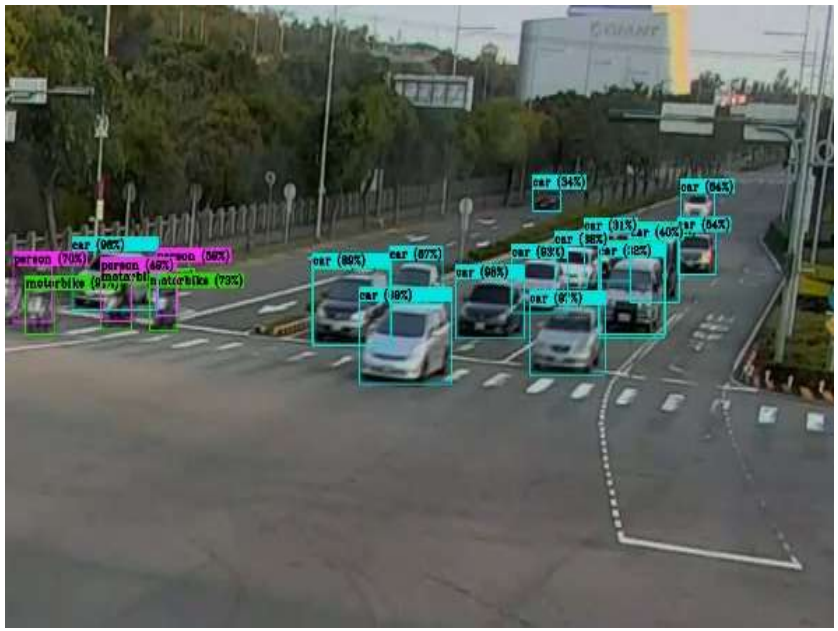
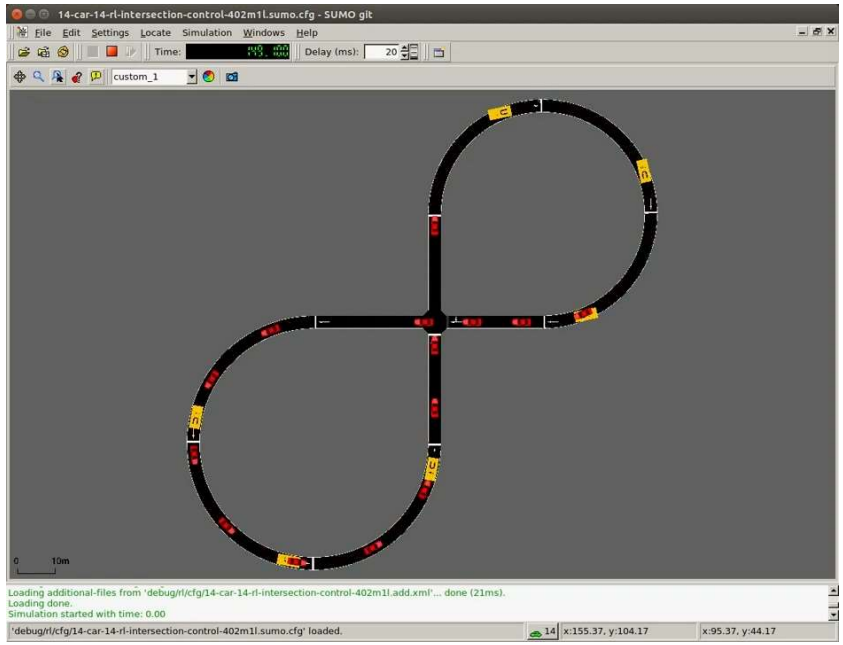
Smart City: AIOT for Urban Science

- National Center for High-performance Computing (NCHC) cooperates with the Massachusetts Institute of Technology (MIT) and Argonne National Laboratory to promote the application of smart metropolis with high-speed computers and AI Deep Learning to solve congestion problems in main cities.



Traffic flows analysis system

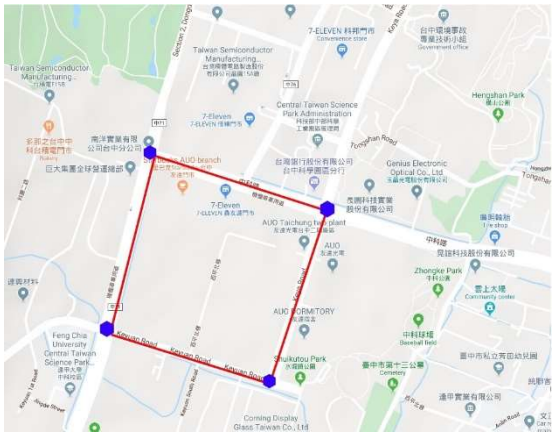


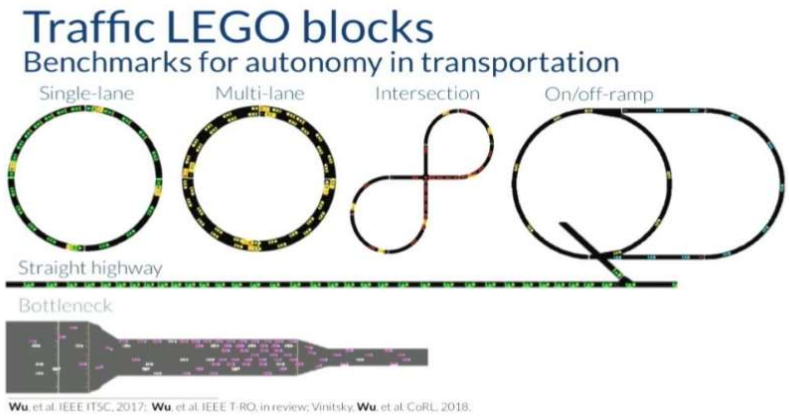
Traffic flow simulation system

Traffic Flow Optimization

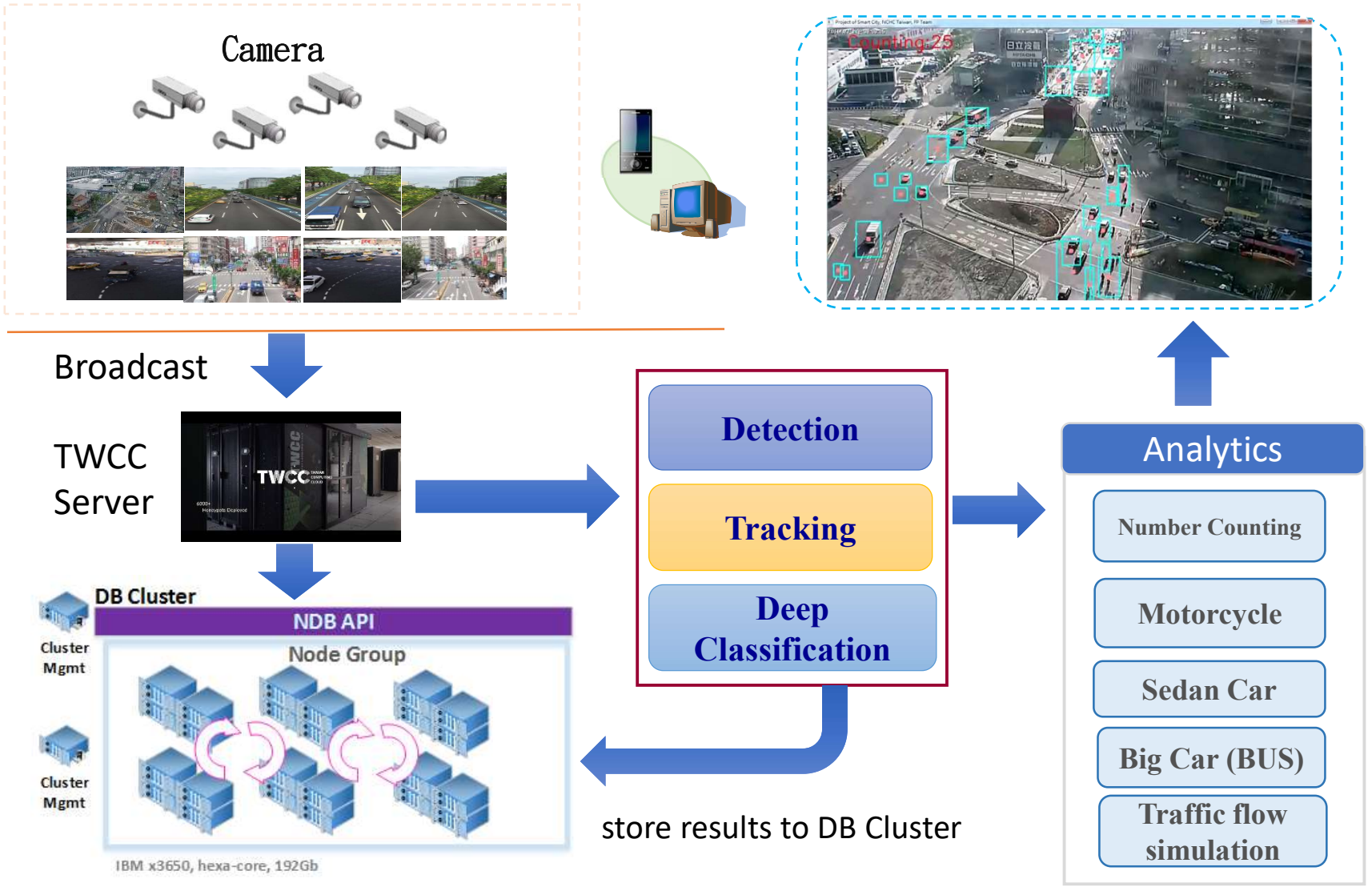
- The results of the first phase of this project including the construction and application of the AOT monitoring system, real-time environmental monitoring in Taichung City, and traffic congestion analysis in the Central Taiwan Science Park (CTSP).

- The analysis of the traffic congestion in the CTSP is based on the intersection information of CTSP as the experimental environment and using MIT's traffic flow simulation system, and the traffic flows analysis system jointly developed by NCHC and Yuan Ze University. These two systems automatically analyze the traffic flow at intersections and learn how to optimize traffic signal allocation to alleviate traffic congestion during peak time.



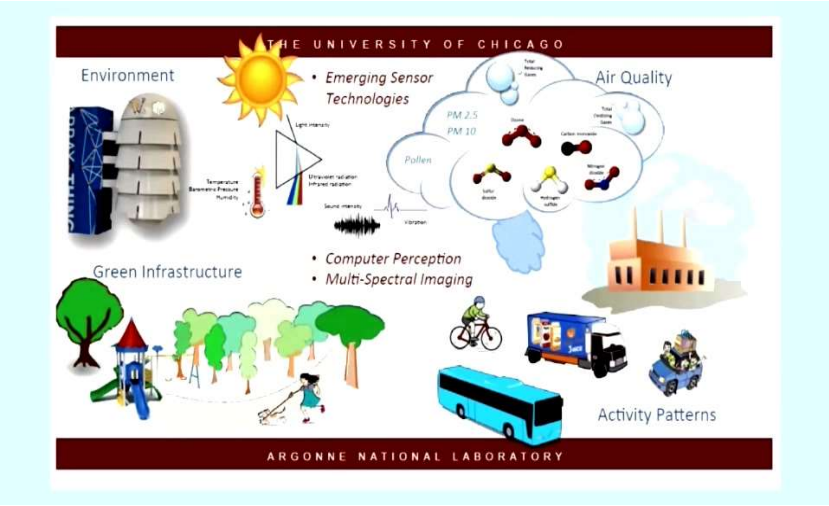


Traffic Flow of Smart City



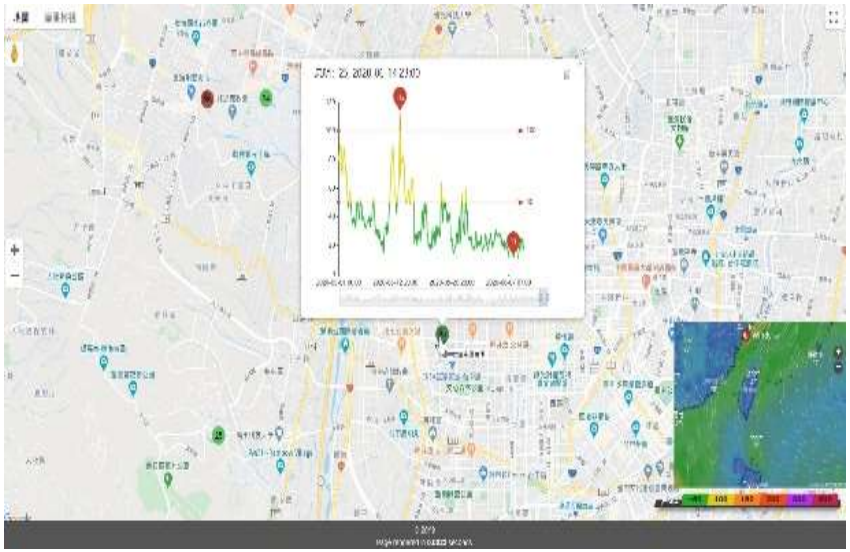
Array of things (AOT)

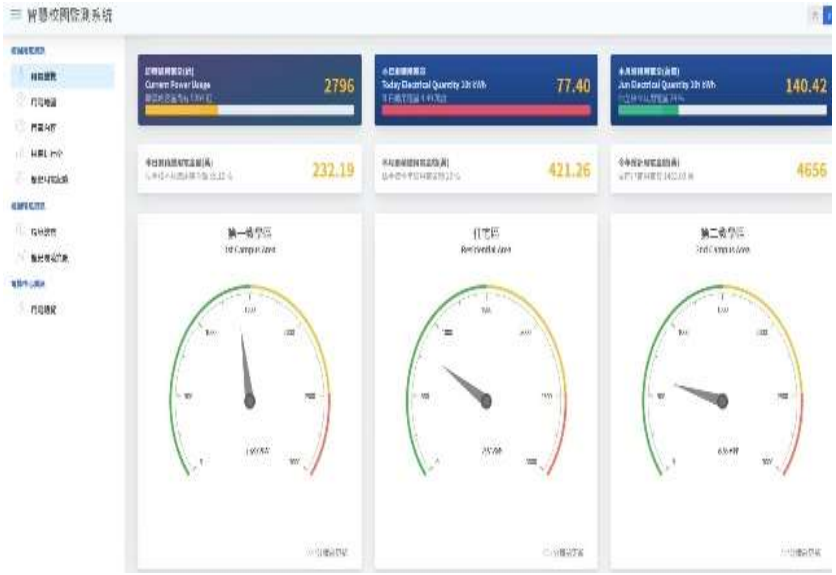
The project further extends to cooperating with National Chung Hsing University (NCHU) and Tung Hai University (THU), we successfully applied the AOT urban monitoring system and sensor analysis to environmental monitoring.



Cloud IoT of Smart Cities

In practice, the system was applied to the cooperation of the Taichung City Government and the Hsinchu City Government to promote the cloud IoT of smart cities to solve the issues of monitoring data convergence and big data application in urban data governance.





Cooperation Partner