Socially Informed Services Conflict Governance through Specification, Detection, Resolution and Prevention

Desheng Zhang, Jing Jin, Suzanne Piotrowski, Gregory Porumbescu   John A. Stankovic   Shan Lin   Fei Miao

Rutgers University   U of Virginia   Stony Brook U   U of Connecticut

IRG-1, FY2020

Vision: We aim to design a socially informed conflict management theory in an uncertain environment to address city service conflicts, including resource conflicts, environment conflicts, and human conflicts. Our theory ensures social inclusion and equity when managing service conflicts for city operators, service providers, and residents.

Intellectual Merit

- An equitable and inclusive approach to designing smart services
- A socially informed computational service conflict management framework
- A social intervention approach to making an impact on diverse community stakeholders

## Activities piloted in Newark, NJ

- A centralized dashboard tool to specify, detect, resolve and prevent conflicts for city operator and service providers.
- 23 publications related to conflict management including one best paper award in ICCPS'21.
- Biweekly meetings with community
- Public service deliberation
- Focus group study
- Infrastructure deployment

Truck Route

Short-term Broader Impact

- A centralized view for city officials to monitor and manage running services

Long-term Broader Impact

- Better service efficiency
- Fewer citizen complaints
- Better social inclusion and equity
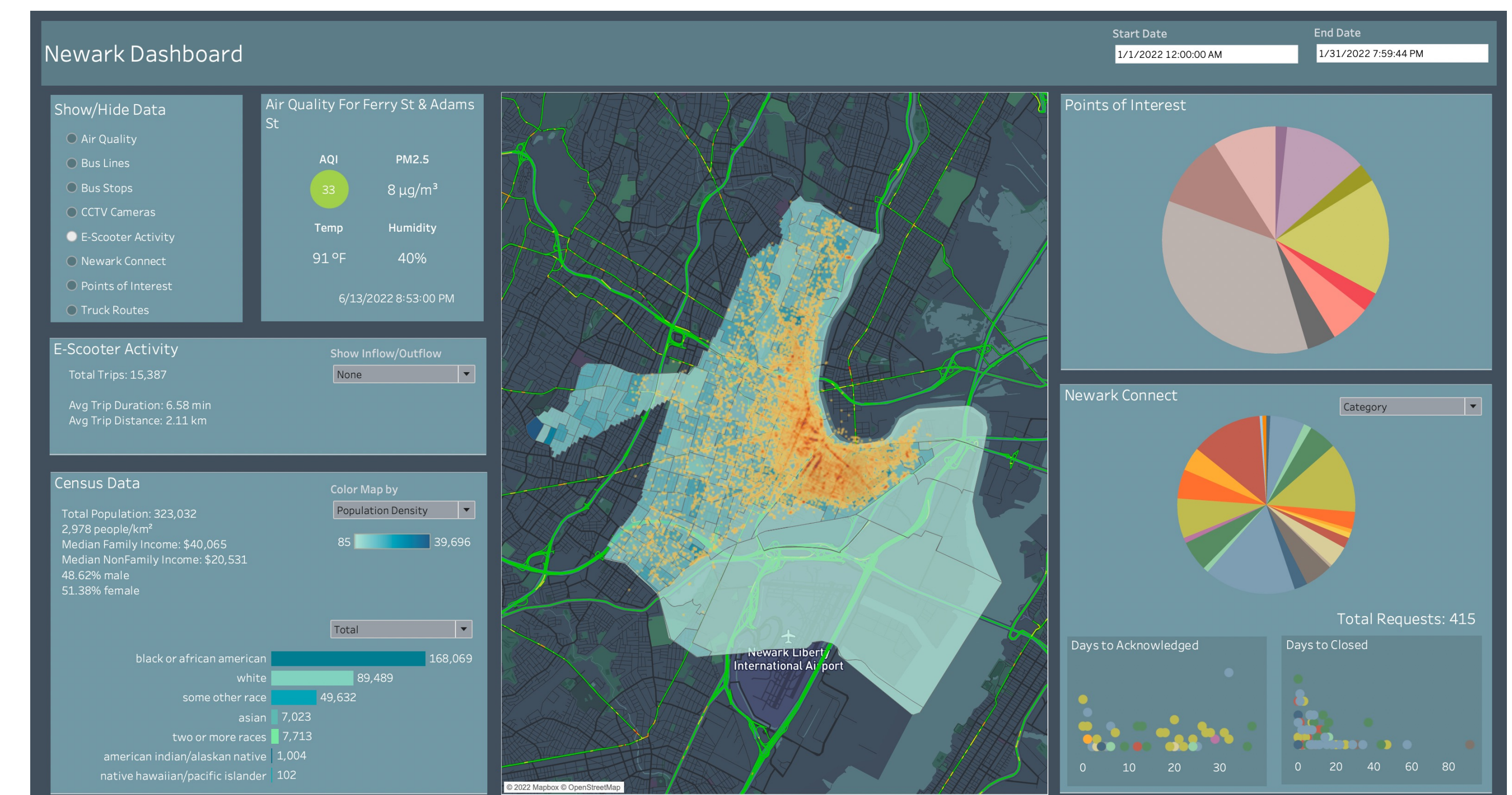
Next Step:

- A case study for service conflict (Truck violation detection and intervention)
- A close-loop conflict management system