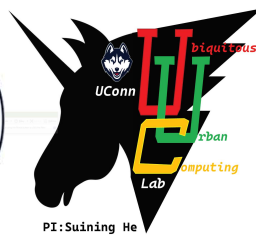


SCC-PG: Towards A User-Centered and Equity-Aware Micromobility Sharing Co-Design Network to Interact with A Distressed Municipality

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Award Type: PG - 2303575



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Project Overview & Challenges



Reimagine the micromobility (electric scooter) sharing program in distressed neighborhood of Hartford, Connecticut.

Key Research Questions:

- (1) How low-income riders have been served by the existing resources and infrastructures;
- (2) How these riders would respond to new, interactive, and user-centered sharing program.

Research Challenges:

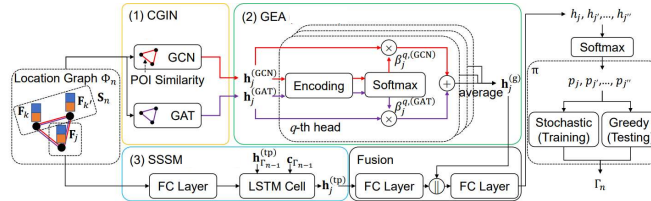
- (1) How to bridge the data and algorithmic gaps in fusing the user-centered studies with the big mobility data analytics for equity-aware micromobility planning;
- (2) How to enable the interactive mobility network studies to gain communities' satisfaction and bring tangible impacts.

PG Project Aims:

- (1) Identify multi-level, multi-facet factors impacting the micromobility;
- (2) Establish and engage a co-design roundtable for interactive design.

Intellectual Merit

- (1) Gather the inputs from stakeholders and co-design an equity-aware micromobility sharing program;
- (2) Reveal essential geospatial, infrastructural, socioeconomic, and policy factors to inform the design and distribution of micromobility resources;
- (3) Help improve the mobility equity.



Planned Analytics Model for Co-Design in IRG Phase

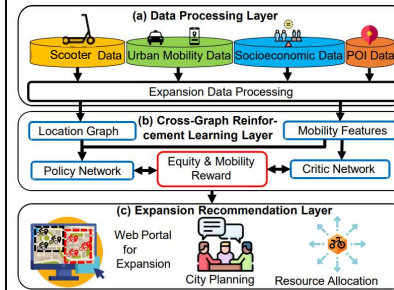
Broader Impact

- (1) Trigger new research directions in urban computing;
- (2) Serve communities at various scales and different micromobility;
- (3) Students from underrepresented groups.

Strong Local Partnership for Co-Design



Major Progress



Key Research Activities in Progress:

Integrating multiple data sources for equity-aware co-design.

SCAN ME



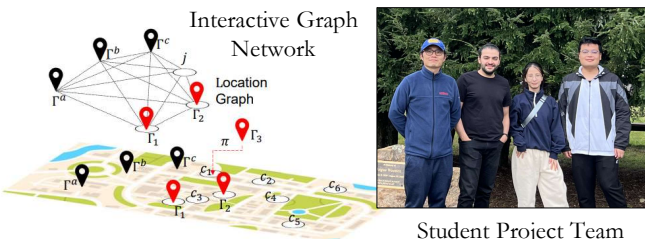
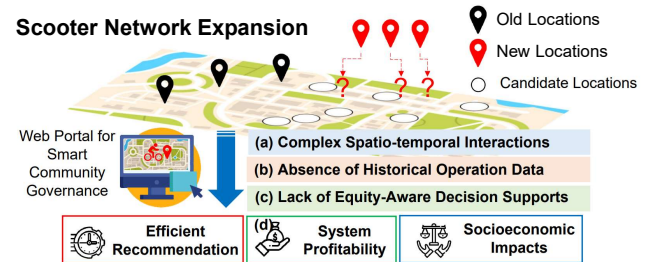
Engagement in Progress:

- Capitol Region Council of Government (CROCG) for coordinating sharing programs;
- Urban Leagues for engaging the distressed communities;
- Lime and others for industrial collaboration.

Research Outcomes (In Progress):

- In Press or To Appear: 1 x ACM SIGSPATIAL (Conference) and 1 x IEEE Transactions on Big Data (Journal);
- Under preparation or submission: multiple papers.

Future Goals



Student Project Team