Project Title	AI-enabled Transportation Network Analysis, Planning and Operations	
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Industry or Government Principal, organization, and contact information	General Motors	
Most relevant CCAT research thrusts (choose all applicable)	__X__ Control & Operations _____ Enabling Technology _____ Human Factors _____ Infrastructure Design & Management __X__ Modeling & Implementation __X__ Policy & Planning	
Funding Request	$137,014	
Matching Funds and Source (if any)		
Total Project Cost	$137,014	
Contract Number	69A3551747105	
Project start/end dates	4/1/2022-3/31/2023	
Project Abstract	Vehicle connectivity and automation would make vehicle trajectory data more readily available. The proposed research aims to leverage this dataset and recent advancements in implicit deep learning to develop an end-to-end modeling framework that would transform the way how metropolitan planning organizations (MPO) analyze, plan and manage their transportation networks. The proposed framework can directly take empirical, sampled trajectory data as inputs to learn drivers' route choice behaviors and estimate traffic flow distribution across an urban traffic network. The proposed framework can further prescribe strategies such as lane direction configuration, parking provision, cordon pricing and perimeter	

	control, to better manage the existing supply of urban traffic networks to reduce congestion.
High-level implementation plan	In this project, the team will collaborate with GM Global RD to conduct a case study of Ann Arbor using vehicle trajectory data from GM.
Project Metrics	
Web Links: [leave blank until project approval]	ccat.umtri.umich.edu