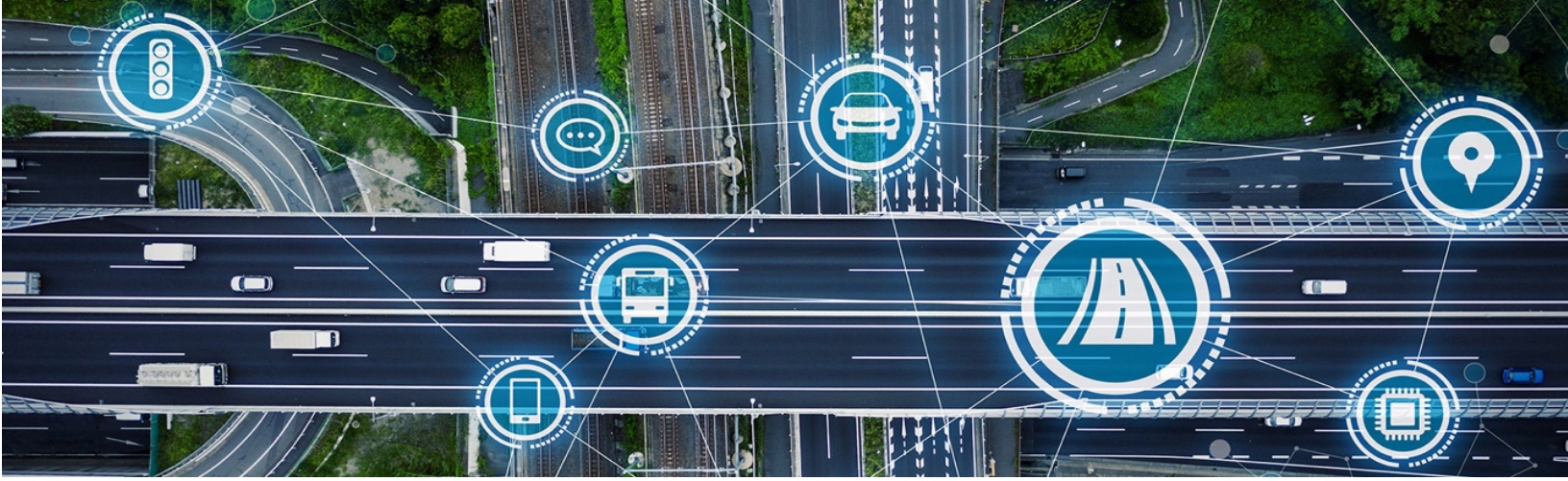


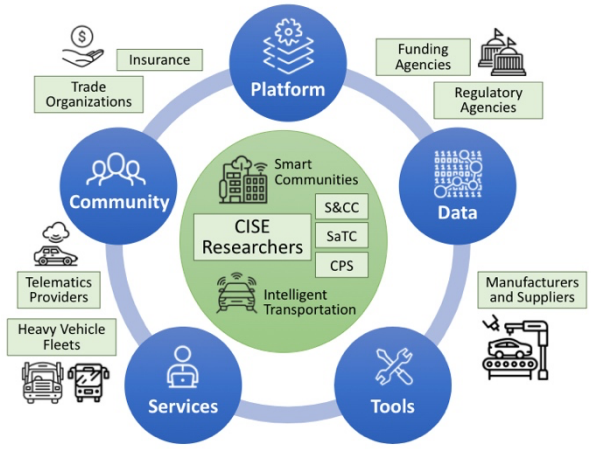
PLATFORM FOR INNOVATIVE USE OF VEHICLE OPEN TELEMATICS (PIVOT)

The University of Memphis, Colorado State University, and USC Information Sciences Institute are collaborating with commercial telematics service provider Geotab to build PIVOT (Platform for Innovative use of Vehicle Open Telematics), a community-based platform intended to catalyze the production and consumption of automotive and heavy duty datasets and associated tools to support the NSF CISE community and others pursuing research in vehicle system cybersecurity, intelligent transportation, and smart and connected communities. The platform component of PIVOT is the hardware and software infrastructure needed to host the datasets, tools, and services. PIVOT will provide the CISE community with in-vehicle datasets, telematics data, an open source data repository, and new open source tools to help collect, process, and analyze data. The user services will employ existing privacy controls as well as enable researchers to further advance privacy approaches using PIVOT datasets.

The PIVOT system contains five pillars of merit:

1. **Platform -** A robust and reliable hardware/software platform upon which the system runs;
2. **Data -** The curation and sharing of the data and contextual information;
3. **Tools -** Common software-based tools to collect, transform, combine, filter, and visualize the data;
4. **Services -** Researcher-centric services for sharing, securing, and evaluating datasets, plus privacy services; and
5. **Community -** Extensive community outreach and engagement to improve the data utility using design feedback mechanisms.

The community will benefit from access to new, hard-to-get CAN and telematics datasets, new tools and tool add-ons to enhance researcher capabilities, and telematics from millions of vehicles through our commercial collaborator. The project will also strengthen the community by providing a forum to exchange ideas and resources, and help researchers form and expand collaboration teams.



The community component of PIVOT focuses on engagement, outreach, and feedback to create a synergistic system to support research efforts. Successful execution of this project will result in new datasets and tools available to the CISE community that will enable new, innovative research in automotive and transportation-related areas, and strengthen the research community through collaborations built around common datasets, tools, and industry involvement. PIVOT will provide artifacts to educate the next generation of automotive cyber engineers through classes in computer science (networking, security, machine learning, digital forensics) as well as classes in transportation and smart and connected communities. The project will emphasize diversity through efforts targeting minority institutions and underrepresented groups and by reaching out to students participating in the industry-sponsored CyberAuto Challenge and CyberTruck Challenge events. PIVOT will organize annual workshops to build and enhance community and support strong advances in automotive security, smart transportation, smart cities and communities, security, safety, privacy, sustainability, and energy.

For more information about the PIVOT project, see our website at https://www.pivot-auto.org/.

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PIVOT