VIEW 2.0: Direct Vision Assessment System

Reinventing the VIEW platform to empower users in vehicle blindzone safety.



Problem Area

Vehicle blindzone awareness is critical to the safety of anyone interacting with a vehicle, whether they are in the driver's seat or outside. Vehicles contribute to an alarming pedestrian and cyclist safety crisis, and there is an annual increase in injuries and fatalities.

VIEW, a blindzone measurement tool for vehicles and a crowd-sourced database of blindzones, was first created by the 2017-2018 SCOPE team. From VIEW's success, there was widespread demand for a more **robust** assessment and a fundamental rethinking of the VIEW system for accuracy, efficiency, and improved usability, bringing about VIEW 2.0.

Process



EVALUATE

Audit existing site and experience of measuring vehicles to identify problem areas. Learn about existing issues by **conducting interviews** with site users and vehicle researchers.



RESEARCH

Create and explore new methods to take vehicle measurements and calculate

Compare VIEW 1.0, Markerless, LiDAR, and April Tag methods for accuracy, accessibility, and ease of use.



DEVELOP

Redesign the website and conduct user tests for comprehension and ease of use.

Develop the new LiDAR measurement experience and data processing back-end with new blindzone visualization processing.



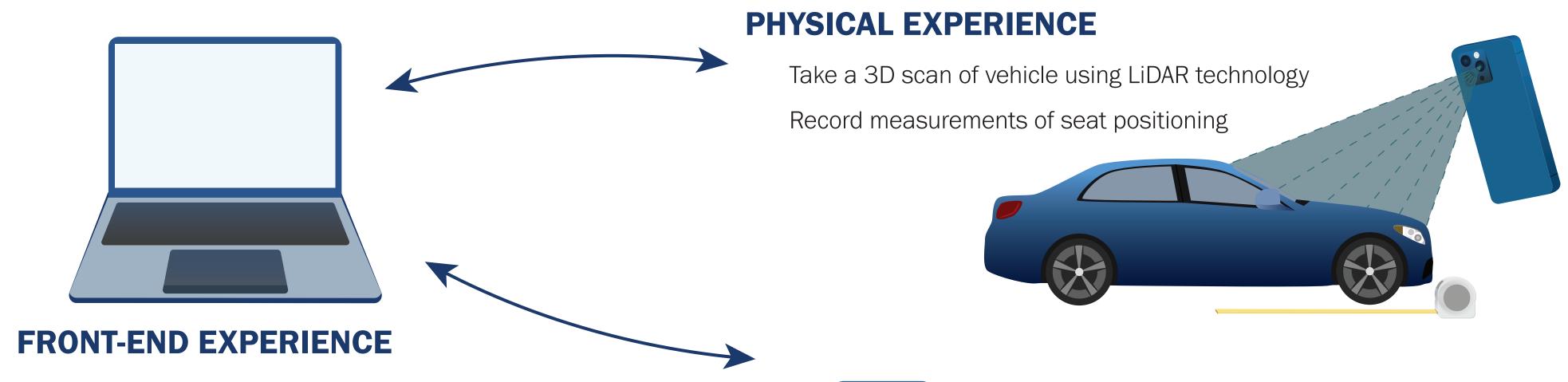
INTEGRATE

Build the new VIEW 2.0 site by integrating the front-end, back-end, and measurement experience.

Test our new site with users to validate our new design has **improved usability.**

System

Our system decreased blindzone inaccuracies by 85%, improved usability, and increased long-term site stability.

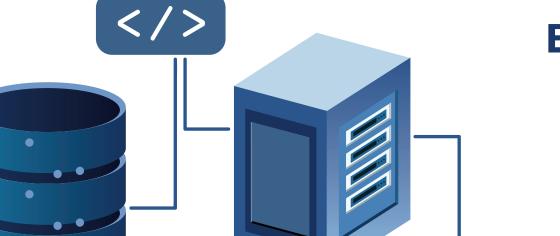


Find information about VIEW and the importance of direct vision

See visualizations of vehicle blindzones for various Vulnerable Road Users (VRUS)

Access instructions to take a vehicle scan and seat measurements

Upload vehicle scan and measurements for processing



BACK-END

Process LiDAR scan and calculate vehicle blindzones

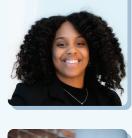
Produce blindzone visualizations

Develop website front-end and back-end

LiDAR Method







Gabrielle Blake







Claire Hashizume **HUMAN-CENTERED**

Benjamin Morris

COMPUTING



Myles Lack-Zell **ADAPTIVE PRODUCT**



Lynn Andrea Stein



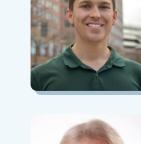




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