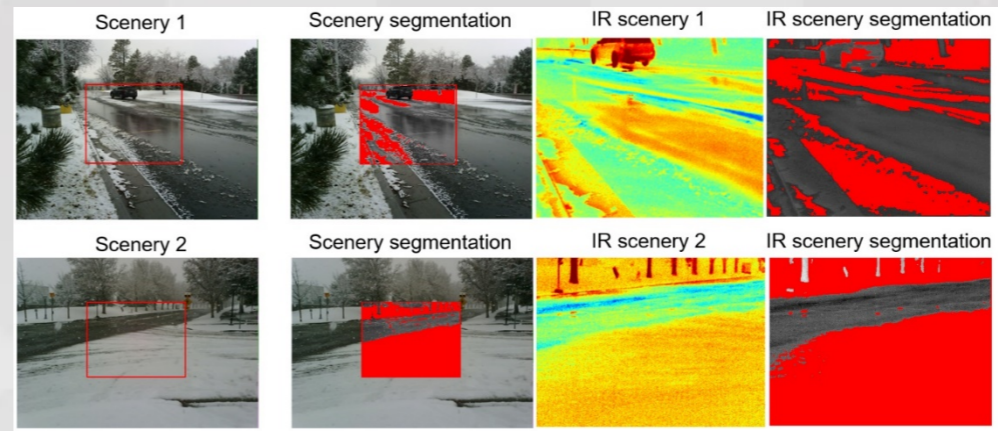


Artificial Intelligence (AI) and Machine Learning (ML)

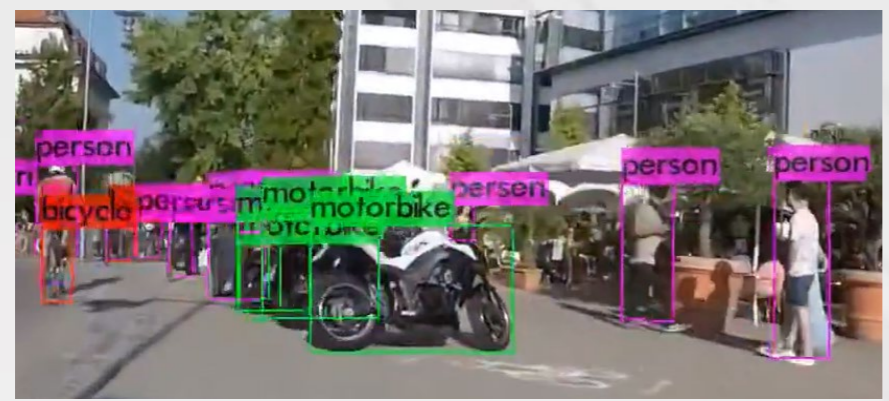
AI is a collection of hard problems which can be solved by humans and other living things, but for which we don't have good algorithms for solving.



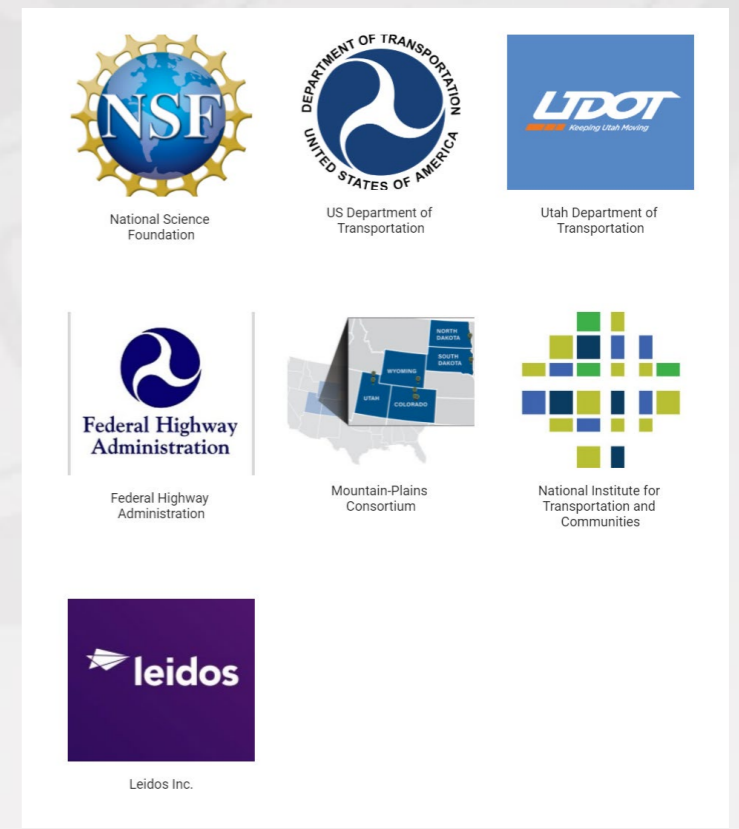
Pavement Condition Assessment



Road Slippery Condition Assessment



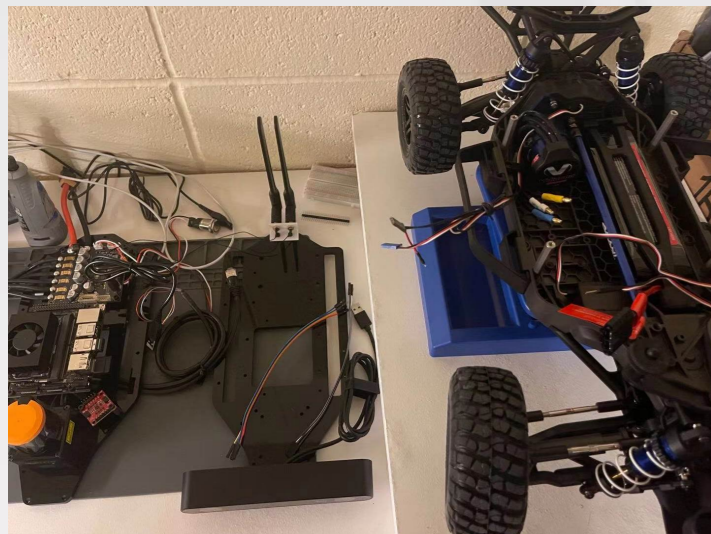
Ped & Bike detection



Connected Autonomous Vehicles



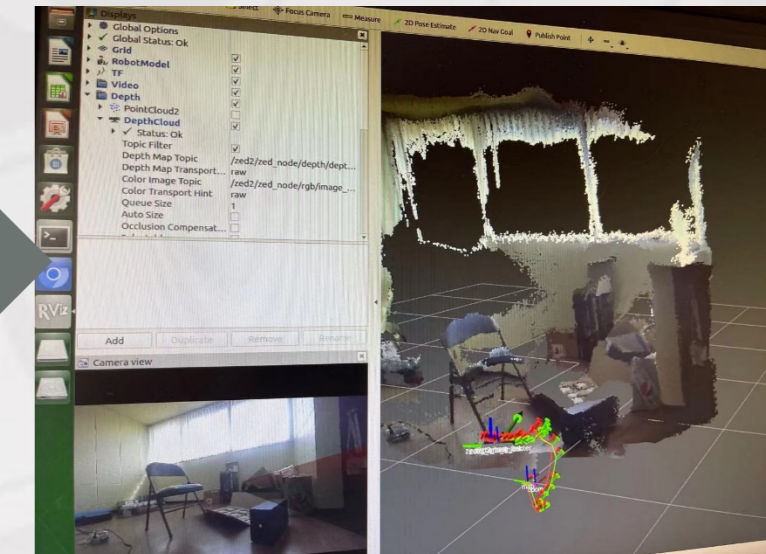
1 Tenth CAV in our U-TRAIL Lab



Assembling the car



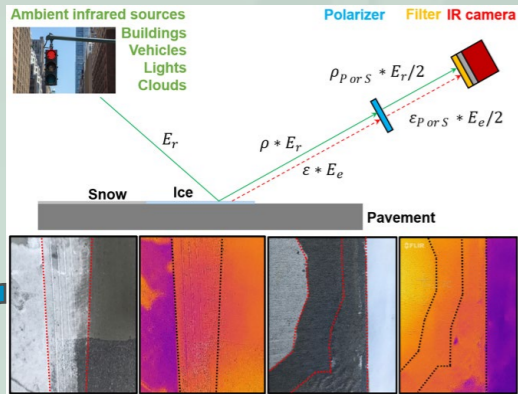
Completed car



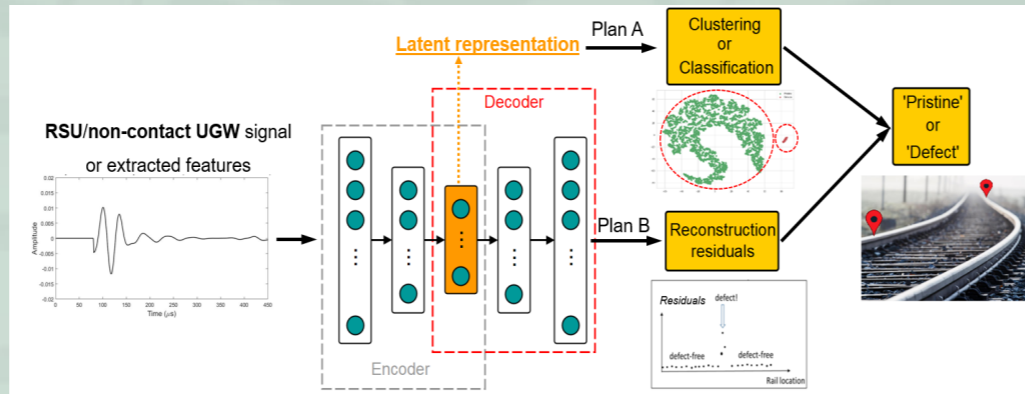
3D environment construction using sensors on the car

Automated infrastructure condition assessment

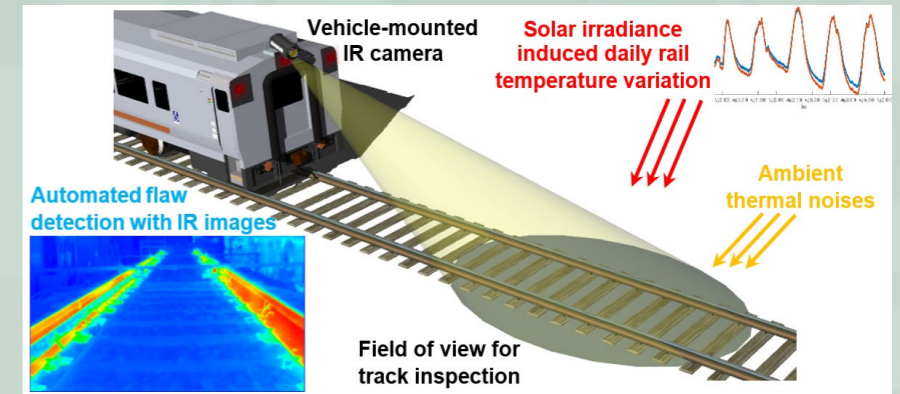
Winter roadway safety



Rail safety powered by AI

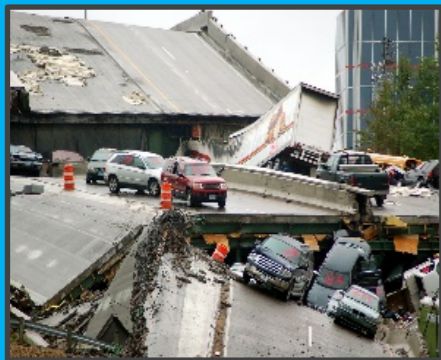


Transit safety with advanced sensing

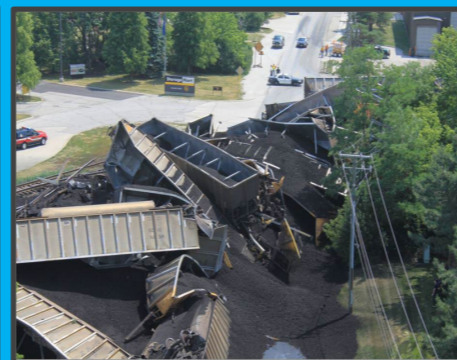


Infrastructure Sensing & Experimental Mechanics (iSEM) Lab

Effective infrastructure **condition assessment and management** PI: Zhu, Email: xuan.peter.zhu@utah.edu



Highway & Bridges



Railroads



Aviation



Energy

Novel sensing technologies modeling & development

Wave propagation modeling

Wave-based power & data communication

Stretchable sensor for 3D imaging

