



Ethics and Autonomous vehicles

Dr. Elizabeth A. Mack
Geography, the Environment, and Spatial Sciences

What is AV?

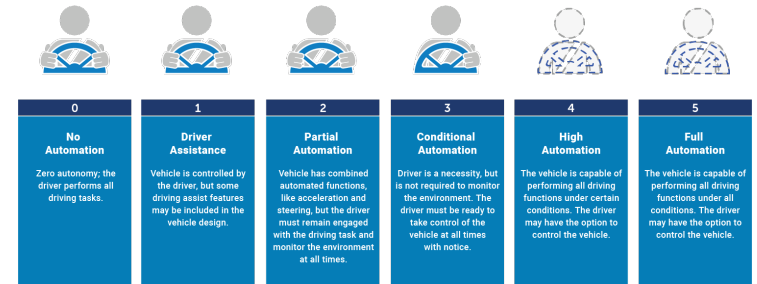
▷ Definition

"Autonomous" or "self-driving" vehicles are those in which operation of the vehicle occurs without direct driver input and are designed so that the driver is not expected to constantly monitor the roadway while operating in self-driving mode.

▷ Stages of Autonomy

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) AUTOMATION LEVELS

Full Automation



BENEFITS

SAFETY

Human error is blamed for more than ninety percent of crashes

ENVIRONMENTAL

AV is based on more automation and electrification, which hold promise for further improvements in better environmental practices.

ECONOMIC & SOCIETAL

Increase mobility for seniors and people with disabilities and expand transportation options for underrepresented communities.

Estimated throughput of the road (capacity) increased by 5 times.

CONGESTION AND CONVENIENCE

Connected AVs may provide an opportunity to mitigate the congestion burden. Driverless cabs are expected to become cheaper and discourage car ownership.

TRUST AND CYBERSECURITY

Location data can be used in data science to correlate with identity & infer personal information, such as home/work locations, behavioral features, and social relationships - creating *“data bias” and “privacy concerns”*.

HUMAN OVERSIGHT, CONTROL, AUDITING

AVs should meet tracking and tracing conditions to allow for a *meaningful form of human control*.

ACCOUNTABILITY

Liability dilemma of the AV manufacturer which showcases the conflict between ethics and law when it comes to liability

EXTREME TRAFFIC SITUATION

Some of these extreme traffic situations will require AVs to make difficult moral decisions. Example, *trolley problem*

ETHICAL ISSUES

WEAVE Team Members:

PRINCIPAL INVESTIGATOR



Sheila R. Cotten

CO-PRINCIPAL INVESTIGATORS



Elizabeth Mack



Chu-Hsiang (Daisy) Chang

FACULTY RESEARCH TEAM



J. Kevin Ford



Peter Savolainen



John Verboncoeur



Troy Hale



Shubham Agrawal

RESEARCH ASSISTANTS



Jenna A. Van Fossen



Nathan Baker



Gwendolyn Paige Watson



Nidhi Kalani

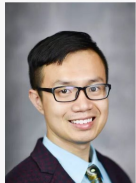


Michael L. Tidwell

POSTDOCTORAL RESEARCHERS



Amy M. Schuster



Sicheng Wang



Noah Britt



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For more project information visit: <https://www.weavensf.com/>