

Five Levels of Vehicle Autonomy



Level 0

No automation:
the driver is in complete control of the vehicle at all times.



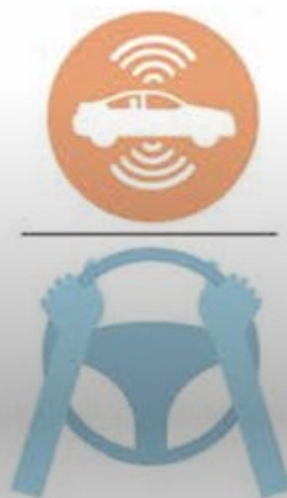
Level 1

Driver assistance:
the vehicle can assist the driver or take control of either the vehicle's speed, through cruise control, or its lane position, through lane guidance.



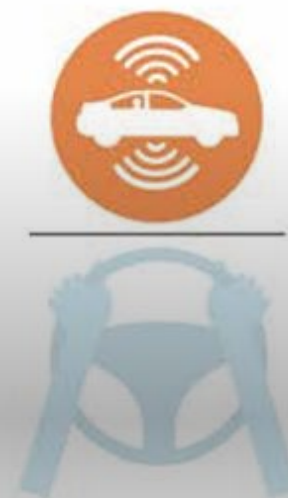
Level 2

Occasional self-driving:
the vehicle can take control of both the vehicle's speed and lane position in some situations, for example on limited-access freeways.



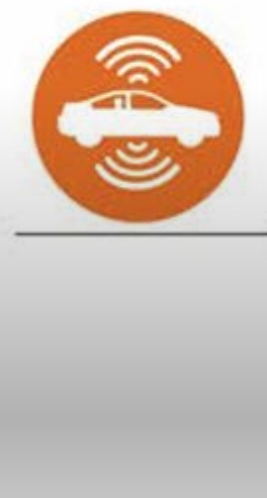
Level 3

Limited self-driving:
the vehicle is in full control in some situations, monitors the road and traffic, and will inform the driver when he or she must take control.



Level 4

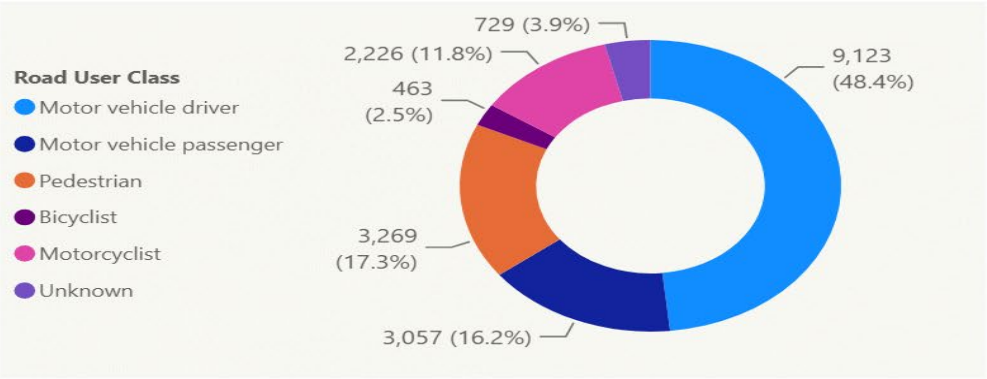
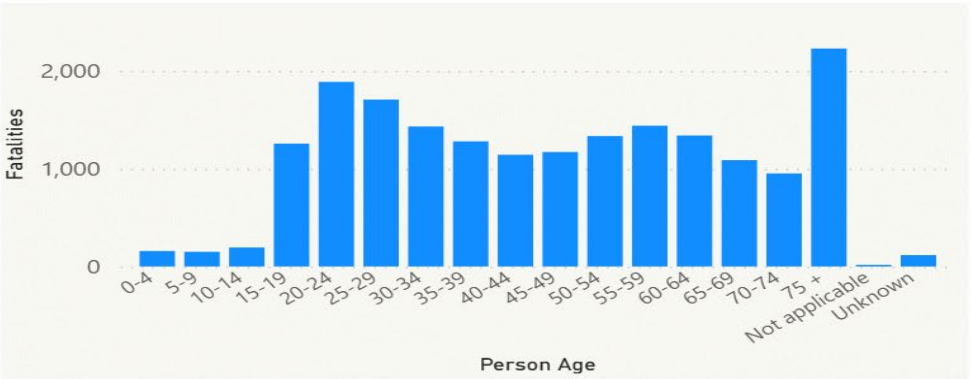
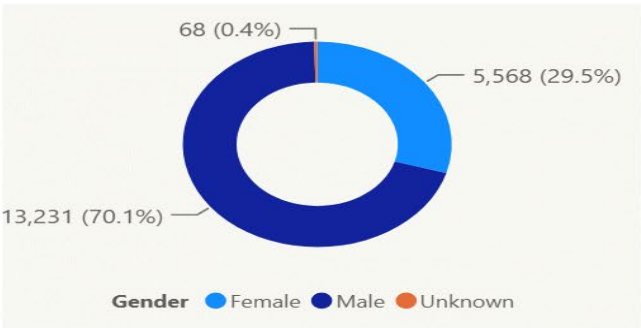
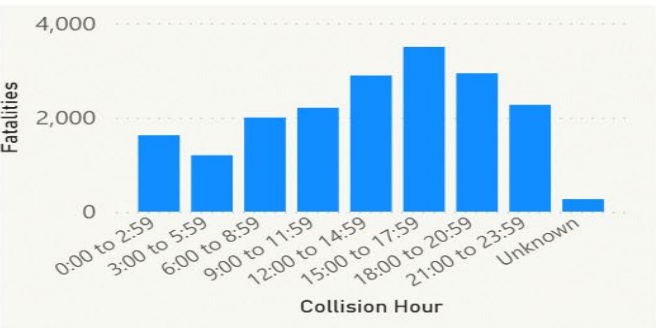
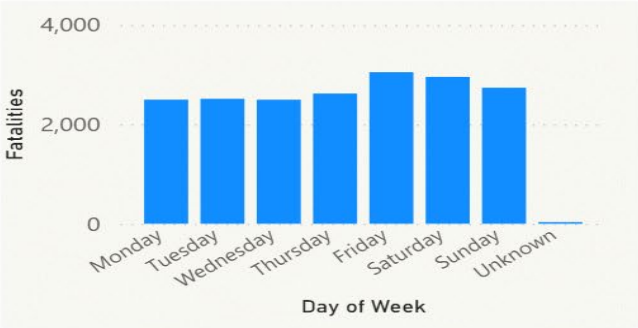
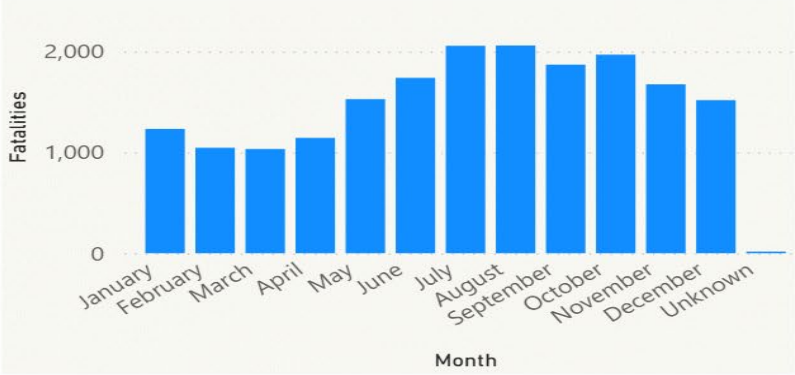
Full self-driving under certain conditions:
the vehicle is in full control for the entire trip in these conditions, such as urban ride-sharing.



Level 5

Full self-driving under all conditions:
the vehicle can operate without a human driver or occupants.

Motor Vehicle Casualties Statistics Transport Canada



What Actually Changes the Price

Variable	Human-Driven	Autonomous
Rating unit	Vehicle-year per power unit	Vehicle-year per power unit and kilometres
Rating factors	Driver age, experience, claims history, annual kilometres, radius of operation	Software version, sensor health, maintenance and calibration, remote-ops coverage, domain difficulty
Loss correlation	Independent losses; large numbers work	One defect can hit the whole fleet — needs a correlation load
Payout profile	Bodily injury and property damage; short tail	Product-liability claims: larger, slower, longer tail
Repricing trigger	Annual renewal on claims history	Each software release may change risk profile

Pricing Risk Without Loss History

Credibility-Weight with Human-Driven Kilometres

Weight thin AV experience with human-driven commercial auto experience as the complement.

Rate the leading indicators

Disengagements, hard-braking events, remote-ops interventions and near-miss rates per 100,000 km get us to a stable loss estimate faster than waiting for claims.

Charge for the uncertainty

Rating and claims-settlement uncertainty is a major concern. Carry an explicit contingency provision above expected cost.

Adjust Insurance Structure

Use shorter policy terms and risk-sharing or profit-share arrangements with the insured. Reinsurance matters more here because software-event risk is correlated across the fleet.