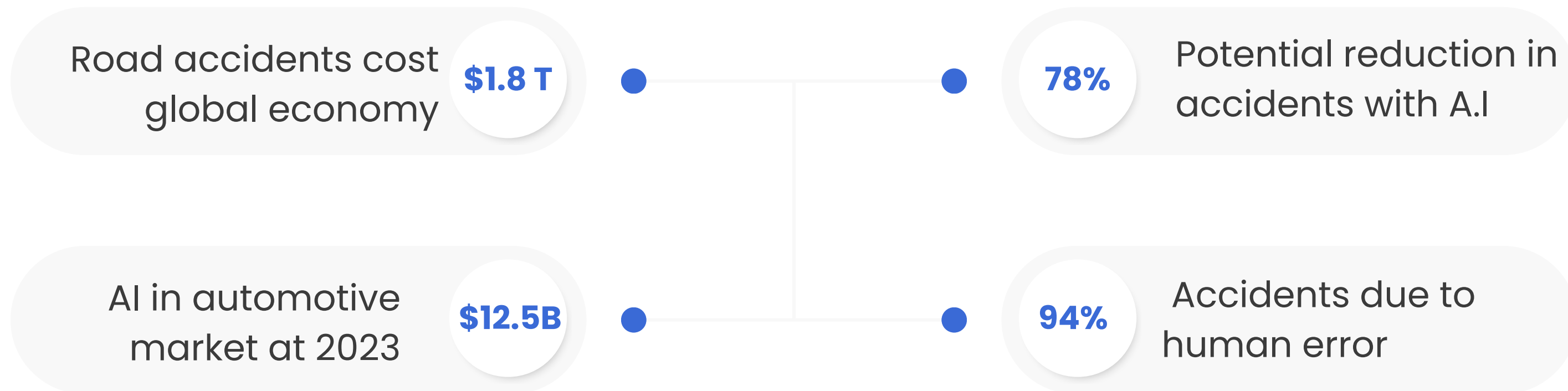**New Dawn**

Advanced Driver Learning System (ADLS)

Revolutionizing Road Safety Through AI and Data Intelligence
Leaving our Mark upon ever rising World

Team Members
Gayatri Purohit
Shivansh Yadav
N.Bala Yashaswini

Vision

Creating an AI-driven ecosystem that transforms driving safety through predictive analytics and real-time intelligence

Key Statistics

Road accidents cost global economy **$1.8 T**

78% Potential reduction in accidents with A.I

AI in automotive market at 2023 **$12.5B**

94% Accidents due to human error

Solution

Introducing ADLS – The AI-Powered Driving Solution

- Create dynamic Vehicle Personas for every vehicle using real-time AI and sensor data.

- Enhance road safety, optimize EV performance, and deliver actionable insights.

- Enable real-time vehicle-to-vehicle communication for predictive safety and securtity.

How It Works

1 — Collect data, Analyze data

2 — Train predictive models for safety alerts and battery optimization.

3 — Integrate with V2V intelligence
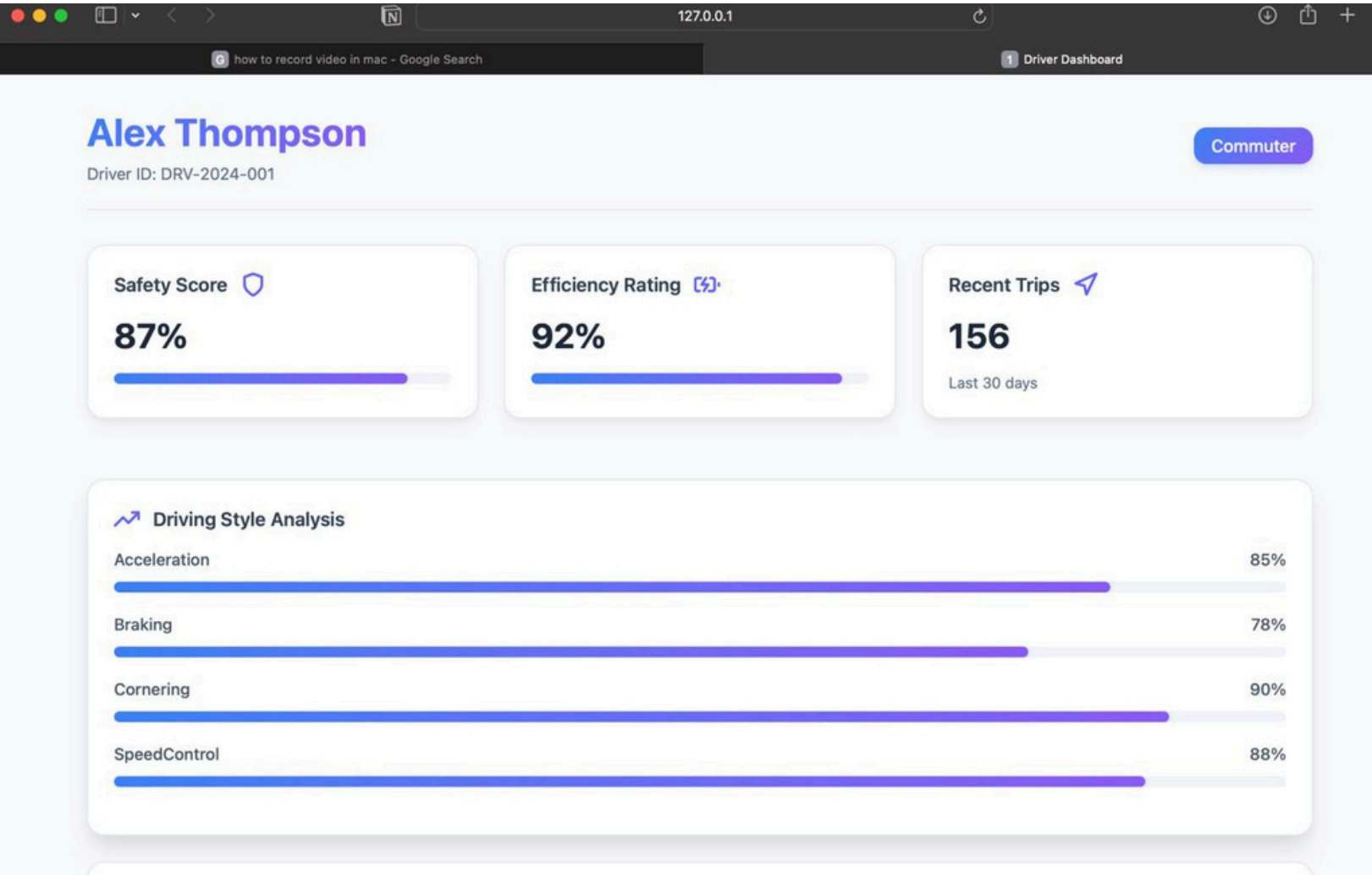
Maximum Magnitude Moment:
Timestamp   2021-02-02 10:28:33
Milliseconds   19045.7
X   -2.161586
Y   -2.671945
Z   11.172986
Magnitude   11.689627
Jerk   1.671747
Rolling_Magnitude   10.435052
Delta_X   -0.165839
Delta_Y   -1.418356
Delta_Z   1.436282
Energy   4.102141
Cluster   1.0
Anomaly   -1.0
Name: 2021-02-02 10:28:52, dtype: object

Minimum Jerk Moment:
Timestamp   2021-02-02 10:30:05.000000256
Milliseconds   111041.083333
X   -0.807877
Y   -0.713535
Z   7.953045
Magnitude   8.025753
Jerk   -2.345121
Rolling_Magnitude   9.845508
Delta_X   1.210463
Delta_Y   -1.259112
Delta_Z   -2.204893
Energy   7.912134
Cluster   1.0
Anomaly   -1.0
Name: 2021-02-02 10:31:56, dtype: object

Key Features

Personalized Vehicle Personas

Tailored insights for safety and performance.

Real-Time Risk Analysis

Environmental and regional risk mapping

ADAS Enhancements

Adaptive cruise control, collision prevention, and lane management, we use master model to divide itself to suit various useCases

Technology Stack

Powering ADLS

Data Collection

- Vehicle sensors
- IoT devices
- environmental monitoring

Backend: Python, Flask, SQLite

Predictive modeling, anomaly detection, and continuous learning.

Tools: Jupyter for analysis, Git for version control

For real-time processing and V2V communication.

Stakeholder Benefits

Consumers

Safer driving, better battery life, and fewer accidents. better insurance rates.

Insurers

Accurate driver risk profiling and reduced claims

Manufacturers

Insights for product improvements and predictive maintenance.

1 User Data will be Secure Via Random Encription

2 Anonymization protocols for driver privacy.

3 Compliance with global data protection standards

Thank You

At the heart of this vision is our commitment to empowering people with tools that save lives, improve experiences, and protect our planet. Together, we're driving toward a future that's safer, smarter, and more sustainable for everyone.

Hope Roads Are Safer

Vehicles Are Smarter

Energy Is Optimized