# gradientor.ai

pragmatic autonomous driving

We are building next-generation vision-based driver assist systems

ADAS market projected growth:

$14B in 2016 ⟶ $67B in 2025

**— Grand View Research report**

# ADAS today: a tale of two extremes

- The Scylla of legacy systems
  - Disparate set of narrow-purpose sensor-algorithm combos
  - Reliance on «classic» computer vision limits working conditions (e.g. high quality lane markings required)
  - Not fit for gradual functionality extensions (contrast: Tesla)

# ADAS today: a tale of two extremes

- The Charybdis of full autonomy aspirations
  - Last 5% of use cases is 95% of system complexity
  - Expensive sensor suites and computing platforms
- Radically harder to pull off outside of «first world»

# Our approach

Leverage **modern computer vision** and **deep learning** to build driver assist systems that are **more functional**, **robust** and **extendable** than state of the art.

Capture **most of the utility** of autonomous driving at a **fraction of complexity** and **cost**.

# Our progress to date

- Working prototype: **lane / road following system**
- Does **not** require lane markings
- Handles complex weather and lighting conditions
  - Snow, dirty, wet roads, sharp shadows
- Runs on a regular mid-range laptop, lots of headroom left over

# Watch road following demo

https://youtu.be/H02LA5WQugU

# Our progress to date

- Self-contained **driving data collection solution**
- Works on any Android phone
- High precision steering and velocity inference from built-in accelerometer, gyroscope and GPS
- **No interfacing with the car**, 1-second setup

# Watch steering inference demo

https://youtu.be/HvfqpzvW2E8

# Our next steps

- People: grow the team
- Technology: port road following to low-power commodity platforms (Android, NVIDIA Jetson)
- Partners: increase exposure among ADAS suppliers and related ecosystem players

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inbox@gradientor.ai