AI IN 12 MINUTES FOR AUTOMOTIVE

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1/24
MOTIVATION - WHY AI?

Enhanced safety features
Improved manufacturing efficiency
Personalized customer experiences
Autonomous driving development
Eco-friendly innovations

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2/24
INDUSTRY

Vehicle Design and Engineering
Manufacturing and Assembly
Autonomous and Electric Vehicle Technology
Aftermarket Services and Maintenance
Consumer Sales and Marketing
Research & Development

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3/24 STRATEGIC TRENDS

Electric vehicles (EVs)
Autonomous driving tech
Connected car systems
Shared mobility services
AI in manufacturing
Sustainable materials use
Digital retailing
Vehicle-to-everything (V2X) communication
Predictive maintenance
Cybersecurity enhancements

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WHY CHANGE?

Emission regulations
Consumer safety demand
Competitive market
Technological advances
Urbanization challenges

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LEADING THE CHANGE

Tesla
Toyota
Volkswagen
Ford
BMW
General Motors
Volvo
Mercedes-Benz
Honda
Nissan

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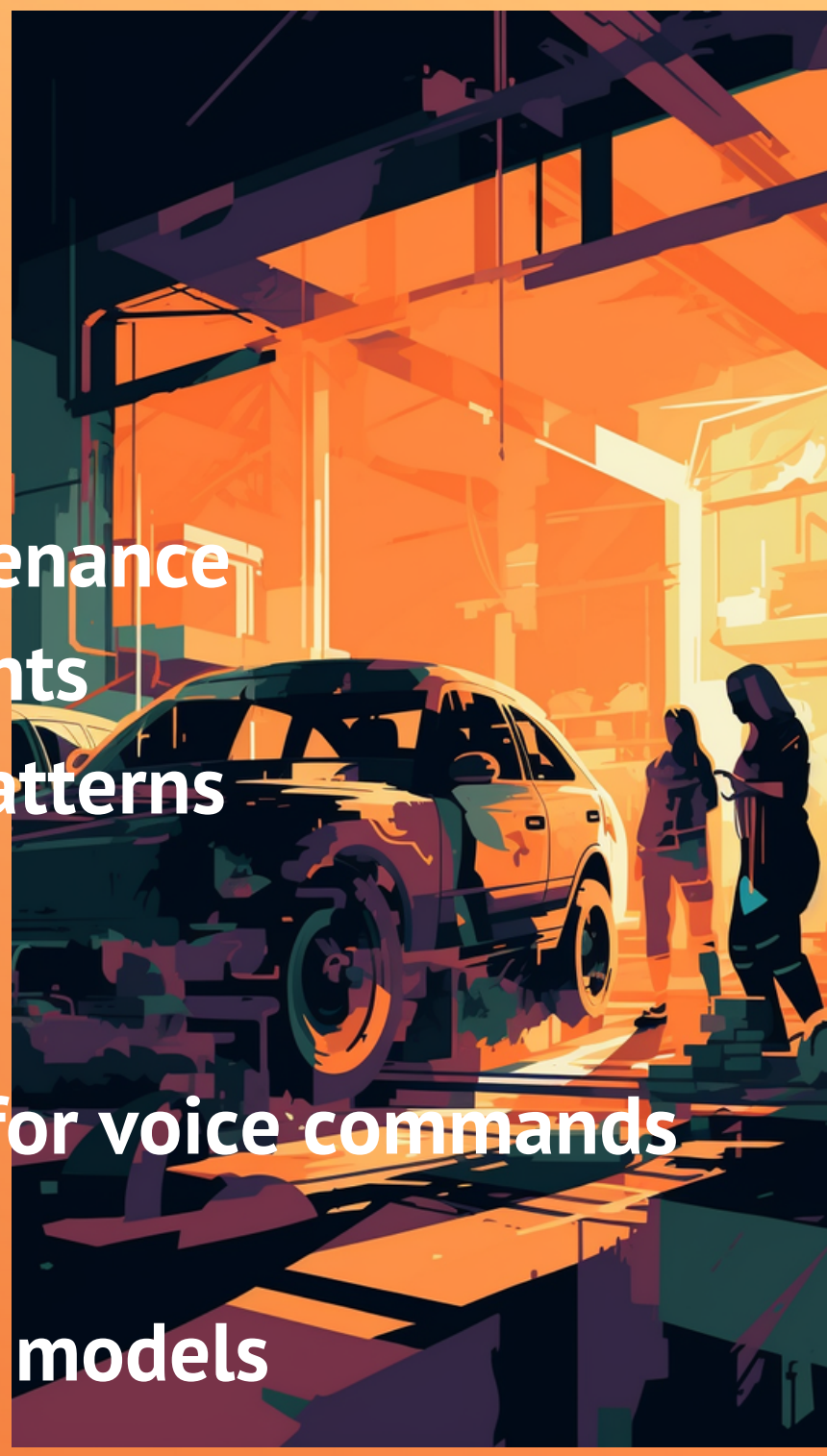
6/24
DIGITAL TRANSFORMATION

Electric drivetrains
AI-powered autonomous systems
IoT connectivity
Lightweight composite materials
3D printing in prototyping
Augmented reality in design
Blockchain for supply chain
Big data analytics
Robotics in assembly lines
Advanced driver-assistance systems (ADAS)

7/24
AI DISRUPTION



Self-driving algorithms
AI in quality control
Predictive analytics for maintenance
Personalized in-car AI assistants
Machine learning for traffic patterns
AI-driven safety features
Smart manufacturing robots
Natural language processing for voice commands
AI in vehicle testing
Customer behavior prediction models

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8/24
GREAT EXAMPLES OF AI

Tesla’s Autopilot for semi-autonomous driving
Waymo's fully autonomous driving technology
BMW’s Intelligent Personal Assistant
Ford’s use of robots in manufacturing
Toyota’s AI-powered safety systems
Nissan’s ProPILOT Assist
Volvo’s autonomous electric buses
Mercedes-Benz’s MBUX voice assistant
Audi’s traffic jam pilot system
GM’s OnStar Go with IBM Watson

9/24 ECOSYSTEM REQUIREMENTS

High-speed data networks
Advanced computing infrastructure
Skilled AI workforce
Collaborative industry standards
Government regulatory support

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10/24

AI ⏩ SUSTAINABILITY

Reduced carbon emissions

Efficient resource use

Lower energy consumption

Decreased traffic congestion

Enhanced recycling processes

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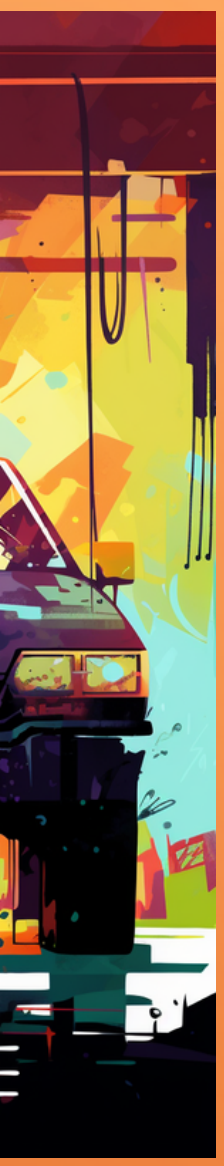

11/24
NEW RISKS - ETHICAL, LEGAL, SOCIAL

Cybersecurity threats
Ethical concerns in AI decisions
Job displacement fears
Data privacy issues
Liability in autonomous accidents

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12/24 AI MISUSE EXAMPLES

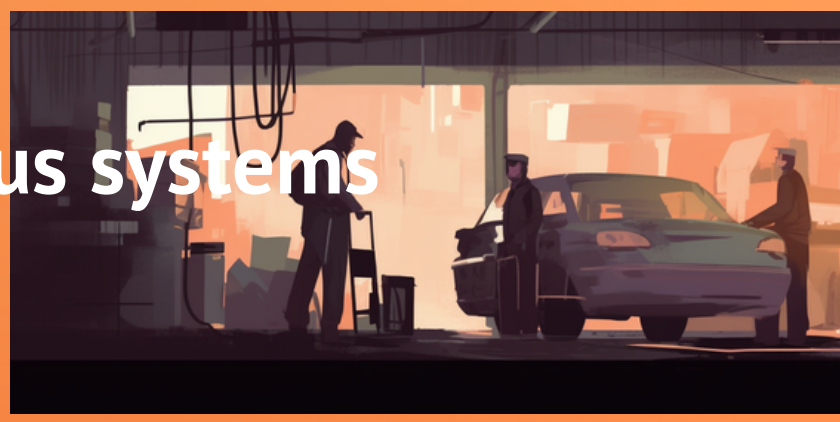
Hacking of connected vehicles

Misuse of driver data

AI biases in decision-making

Unauthorized surveillance

Manipulation of autonomous systems



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THREE
AI DILEMMAS

AI control vs. human oversight?
Privacy vs. convenience in connected cars?
Ethical AI use in life-or-death decisions?

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14/24 ORGANIZATIONAL REQUIREMENTS

Robust cybersecurity measures
Continuous AI skill development
Ethical AI development frameworks
Cross-sector collaboration
Agile product development cycles

15/24
STEP BY STEP APPLICATION

Identify AI use cases
Pilot AI in limited scenarios
Scale AI solutions across operations
Continuously monitor AI performance
Adapt AI systems to feedback

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16/24 BEST PRACTICES

Prioritize safety in AI applications

Maintain transparency in AI decisions

Foster cross-industry partnerships

Invest in AI ethics research

Embrace agile methodologies

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17/24
AI TOOLS & MODELS

Convolutional neural networks for image recognition

Reinforcement learning for autonomous driving

Generative design algorithms for vehicle parts

Predictive models for maintenance

Sentiment analysis for customer feedback

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18/24
USEFUL
DIGITAL TWINS

Digital twins for vehicle design
Virtual production lines for efficiency testing
Simulation models for autonomous driving scenarios
Digital replicas of supply chains
Virtual showrooms for customer experience

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19/24
COOL NORWEGIAN CASES

Q-Free: Traffic management solutions.
Kongsberg Automotive: Automotive parts R&D.
Hexagon Purus: Hydrogen tanks, EV batteries.
NEL Hydrogen: Hydrogen fueling solutions.
Tomra Systems: Recycling for sustainability.
Zaptec: Smart EV charging.
Evyon: Advanced EV battery systems.
Fjell Technology Group: Material handling R&D.
Pixii: Battery and energy storage.
Driivz: EV charging management platform.

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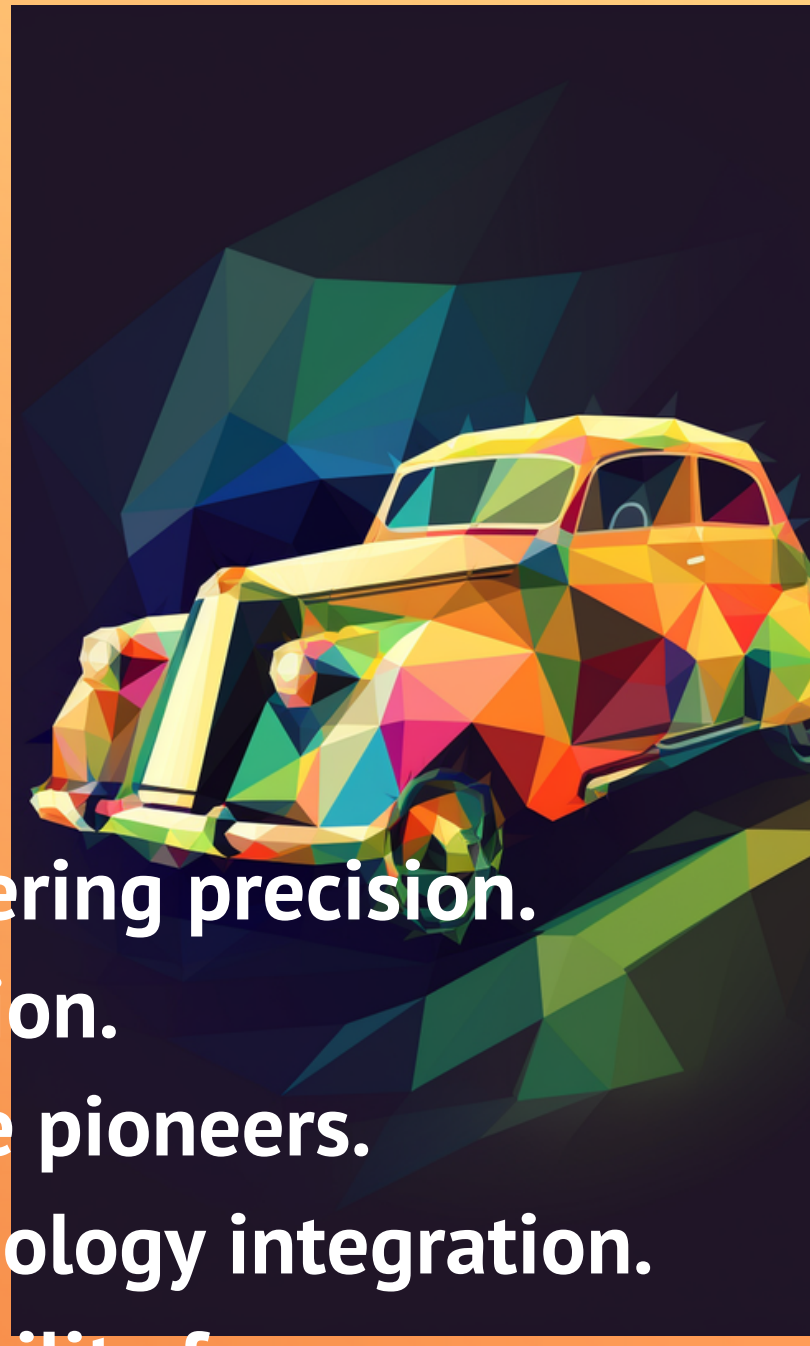
20/24
GLOBAL LEADERS



Germany: Luxury and engineering precision.

Japan: Efficiency and innovation.

United States: Electric vehicle pioneers.

South Korea: Advanced technology integration.

Sweden: Safety and sustainability focus.

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21/24
FUTURE JOBS

Autonomous vehicle engineer
EV battery technician
AI algorithm developer
Cybersecurity specialist for automotive
Sustainable materials researcher

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22/24
THE FUTURE OF AI

Fully autonomous driving
AI in personalized vehicle design
Smart traffic management systems
AI for sustainable manufacturing
Enhanced in-vehicle AI assistants

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23/24 RECOMMENDED READING

"Autonomy" by Lawrence D. Burns

"The Future Is Faster Than You Think" by Peter H. Diamandis and Steven Kotler

"Drive" by Daniel H. Pink

"The Upstarts" by Brad Stone

"Clean Disruption of Energy and Transportation" by Tony Seba

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24/24 GOOD TED TALKS

"How autonomous cars will change the world" by Tony Seba

"The ethical dilemma of self-driving cars" by Patrick Lin

"Why we need to imagine different futures" by Anab Jain

"The thrilling potential for off-grid solar energy" by Amar Inamdar

"How AI can bring on a second Industrial Revolution" by Kevin Kelly

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WHAT WOULD YOU ADD?

LET ME KNOW!

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