master.of.code GLOBAL

The Billion-Dollar Advantage:

How 9 industry leaders cracked the AI code

Real implementation stories from Mercedes-Benz, Volkswagen, Toyota, Audi, Continental, and more

90%+

of car dealers in North America utilize chat services, including **AI-powered automotive chatbots**. Common inquiries comprise questions about new cars (31%), used cars (20%), service bookings or in-store visits (28%), and general information.

53%

of vehicle consumers make decisions on purchasing new cars online, leveraging digital channels for discovery, research, testing, and buying.

The Generative AI market in the automotive sector was valued at USD 312.46 million in 2022 and is projected to grow to approximately USD 2,691.92 million by 2032.

71%

of organizations currently use AI, with an additional 22% planning to implement it within the next year.

McKinsey estimates that Generative AI in the automotive industry will generate $300 billion annually by 2035.

Companies adopting AI report an 18% increase in customer satisfaction and employee productivity.

AI

For every dollar invested in AI, businesses achieve an average return of $3.5 (350%), highlighting the technology's exceptional ROI potential.

How Automotive Companies Can Drive Improvements with Intelligent Technology

Company Type	Use Cases	Benefits
Online Car Retailers	• AI-powered chatbots for customer support • Personalized car recommendation engines • Fraud detection in online transactions • Predictive analytics for pricing optimization • Virtual assistants for scheduling test drives and appointments	✓ Increased customer engagement ✓ Higher sales conversion rates ✓ Reduced financial losses
Automobile Part Manufacturers	• Predictive maintenance for machinery and equipment • Supply chain optimization through demand forecasting and inventory management • Quality control using computer vision to detect defects in real-time	✓ Minimized equipment downtime ✓ enhanced supply chain efficiency ✓ reduced maintenance and inventory costs ✓ improved product quality
Car Brands	• In-car voice assistants for hands-free control and information retrieval • Personalized in-car entertainment systems that adapt to user preferences • AI-generated marketing campaigns	✓ Boosted driver convenience and safety ✓ elevated customer satisfaction ✓ more effective marketing
Car Insurance Companies	• Automated claims processing using NLP and ML • Risk assessment and personalized pricing based on driver behavior and historical data • Fraud prevention through anomaly detection algorithms	✓ Faster claims resolution ✓ more accurate pricing models ✓ lowered fraudulent claims costs

Car Dealership GenAI Virtual Assistant

Use case:

Enhancing website interaction and automating the dealership application flow

Benefits:

- Ensure instant support and information to customers at any time, day or night.
- Creates more interactive and enjoyable experiences for website visitors.
- Tailor interactions as per individual client needs and priorities.
- Easily handles fluctuations in traffic and consumer queries.

Master of Code Global partnered with a leading automotive company with a legacy spanning nearly 80 years to develop an advanced Generative AI-powered virtual assistant. The tool is integrated into the website as an un-authenticated web messaging solution. It is equipped with:

Complex routing:

Directs inquiries to the appropriate dealership based on customer location and preferences.

Extensive AI knowledge base:

Delivers accurate and comprehensive replies to questions about 14 distinct brand models.

Seamless human handover:

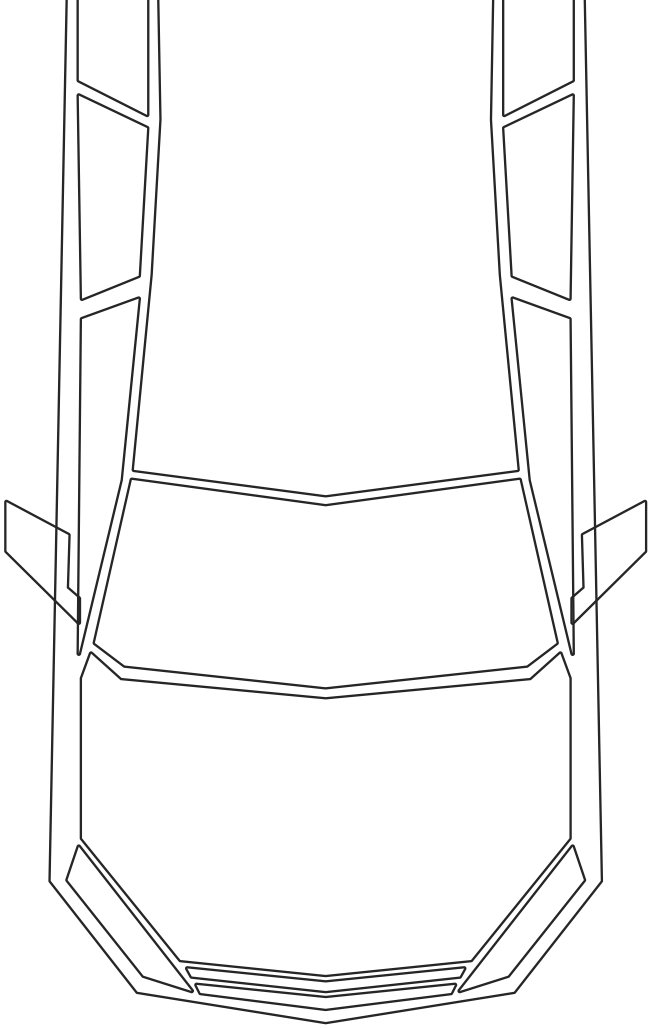
Transfers customers to managers for challenging issues that require a human touch.

CRM integration:

Captures all dialogues in the CRM system, providing valuable insights for sales teams to personalize service and optimize follow-ups.

Key Features:

- Provides efficient and immediate answers to user searches.
- Connects buyers directly with car dealers or agents.
- Employs AI to understand natural language and provide informative, engaging, and human-like responses.
- Allows users to quickly locate the nearest department.
- Guides shoppers through the process of selecting an auto and booking a test drive appointment.

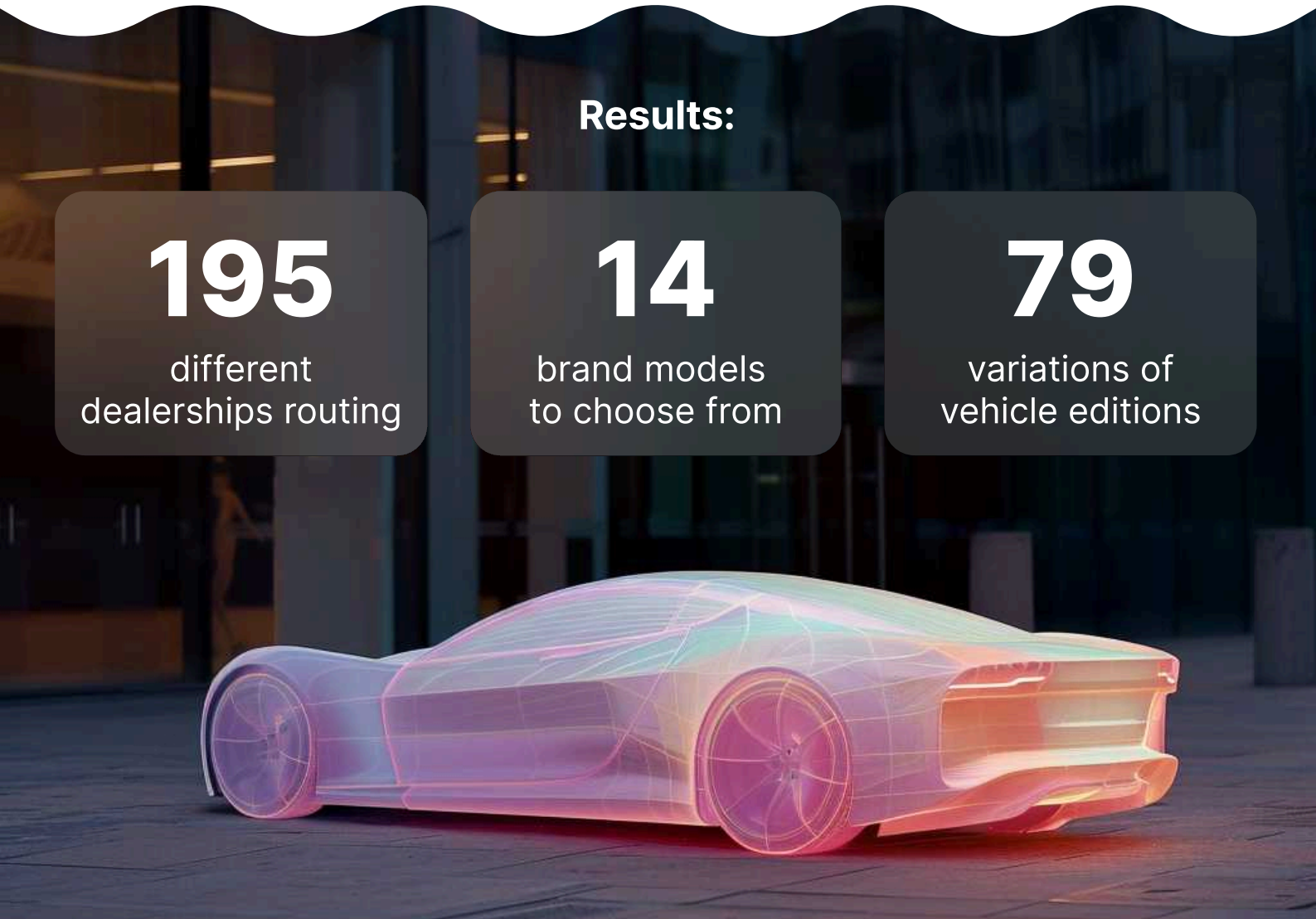


Results:

195
different dealerships routing

14
brand models to choose from

79
variations of vehicle editions



Audi Integrates ChatGPT into Vehicle Voice Control

Use case:

Elevating the in-car experience with a Generative AI-powered voice assistant

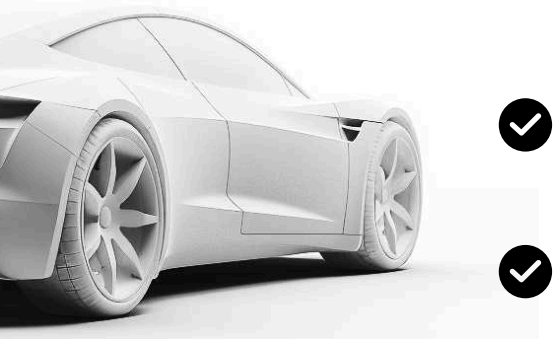
Benefits:

Drivers can control their vehicle more safely without taking their eyes off the road.

Natural language processing enables more user-friendly voice commands.

Effortless data retrieval and hassle-free feature management.

Audi is enhancing its online voice input functionality by integrating ChatGPT into its voice control systems. This initiative aims to provide drivers with a more conversational and intuitive way to interact with their vehicles.

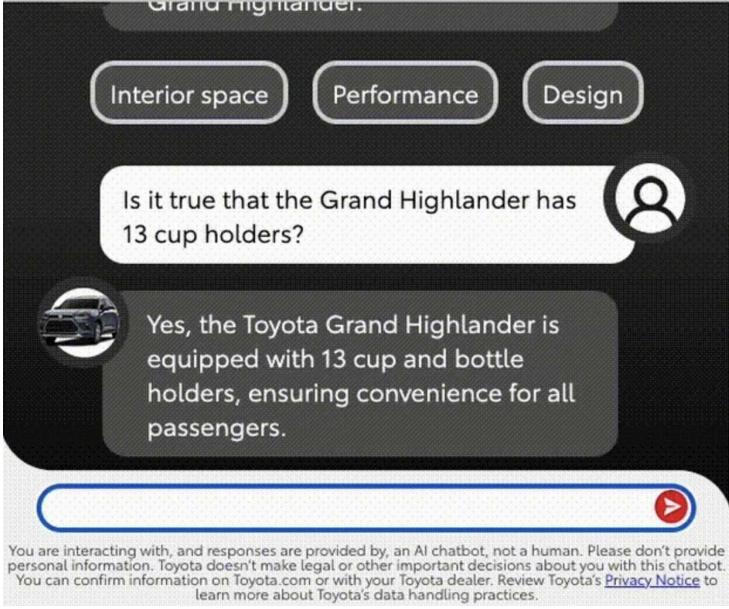


- The integration will be available in around two million Audi models equipped with the third-generation modular infotainment system (MIB 3).
- The enhanced voice control allows drivers to operate the infotainment, navigation, and AC systems, as well as ask general knowledge questions.
- All inquiries and answers are deleted after processing to ensure privacy.

Toyota Creates an Educational Chatbot for Marketing

Use case:

Enhancing customer engagement with an educational and intuitive chatbot



Benefits:

Provides a user-friendly and engaging way for customers to interact with the brand.

Encourages clients to spend more time learning about products and services.

Guides potential buyers through the purchase consideration process.

- It utilizes GPT-4 and a separate data store with training materials and vehicle information.
- The chatbot directs clients to the Toyota website to further explore pricing and vehicle options.
- Early results indicate an uptick in engagement and website clickthroughs versus traditional banner ads.
- TCNA added protection layers to filter questions and provide conservative responses to avoid over-promising.

Renault Introduces "Reno," an AI-Powered In-Car Avatar

Use case:

Developing an AI-powered in-car avatar for personalized assistance and information

Benefits:

- Enhances the driving experience with individualized aid and entertainment.
- Arm with a more intuitive and enjoyable way to interact with their vehicles.
- Proposes proactive suggestions and helpful tips to improve convenience and safety.

Renault has launched "Reno," an AI-powered avatar designed to serve as an intelligent and engaging in-car companion that:

- ☑ Adapts to driver preferences and provides tailored help with features like scheduled charging, vehicle preconditioning, and onboard controls.
- ☑ Offers user tutorials, monitors vehicle condition, and uses AI to answer a wide range of questions.
- ☑ Relies on GenAI to enable natural language interactions and provide a more human-like experience.

Feldman Automotive Group Implements a Chatbot to Boost Sales

Use case:

Driving dealership sales with an AI-powered agent

Benefits:

Provides a user-friendly and engaging way for customers to interact with the brand.

Encourages clients to spend more time learning about products and services.

Guides potential buyers through the purchase consideration process.

Feldman Automotive Group integrated a chatbot aimed at increasing customer engagement and boosting car sales.

- The agent targets prospects within a distinct geographic radius of Feldman dealerships through Facebook ads.
- It engages interested consumers through Facebook Messenger conversations, utilizing AI and natural language processing to qualify leads.
- The bot guarantees uninterrupted guidance and uses vocabulary specific to the automobile sales process.

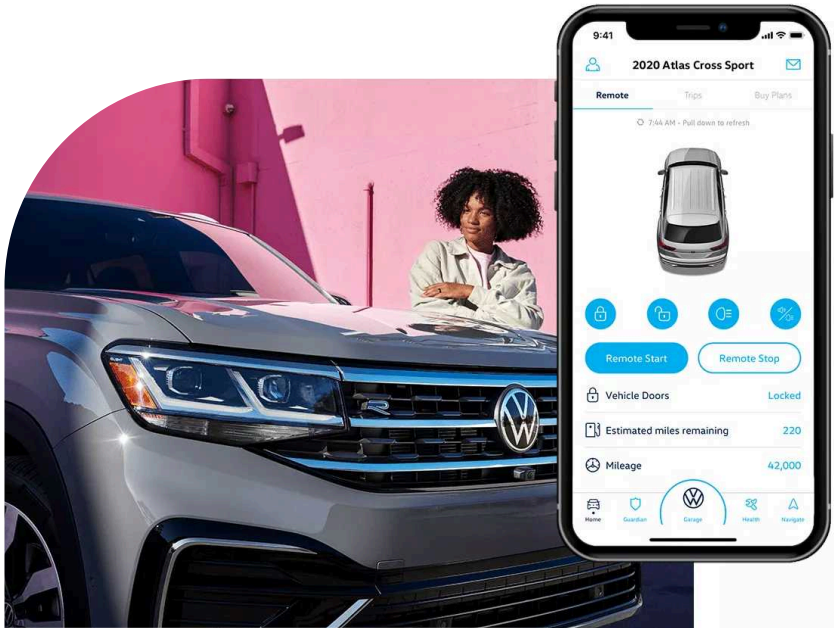
Results:

Reached nearly **100,000** people.

Achieved click-through rates of **4.5 - 5%**

Generated approximately **50 vehicle sales per month.**

Volkswagen Integrates GenAI into its Mobile App



Use case:

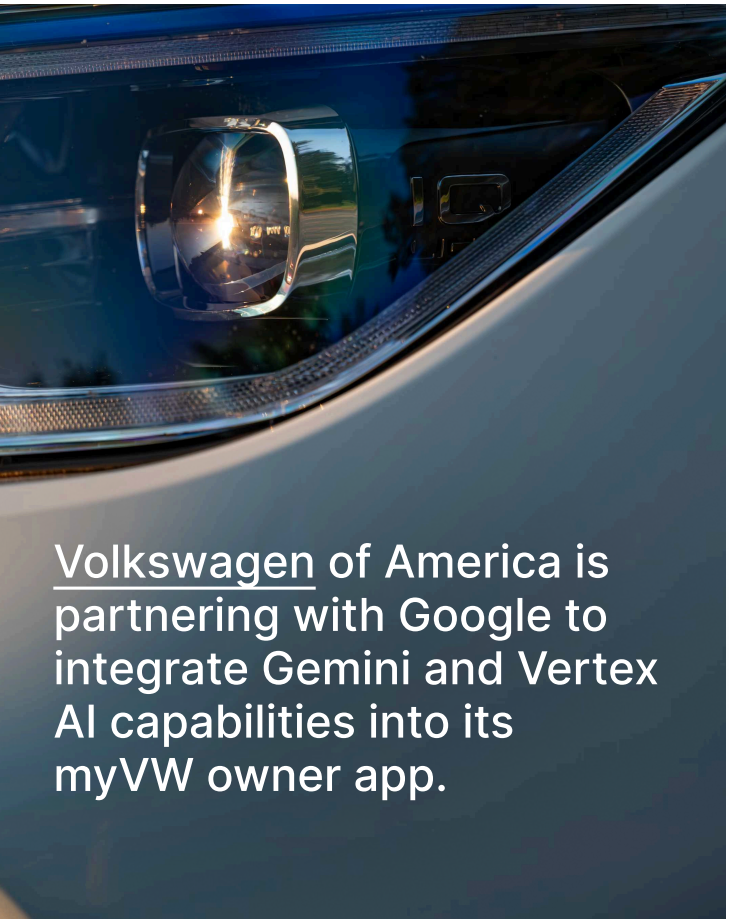
Providing seamless access to vehicle information through an AI-powered mobile app

Benefits:

Offer a user-friendly and intuitive interface for accessing car characteristics and services.

Quickly and easily find the details they need, from how-to guides to explanations of dashboard indicator lights.

Empower drivers with convenient access to knowledge and support, leading to greater satisfaction with their ownership experience.



Volkswagen of America is partnering with Google to integrate Gemini and Vertex AI capabilities into its myVW owner app.

→ The app provides a new virtual assistant that offers smoother access to critical automobile data and features.

→ Vehicle owners can search their manuals by simply posing a question, such as "How do I change a tire?"

→ The app leverages multiple resources, including official instructions, FAQs, and YouTube videos, to provide a detailed overview.

→ Multi-modal capacities allow users to get info on indicator lights by pointing their smartphone cameras at their dashboards.

Continental's AI-Empowered Workplace

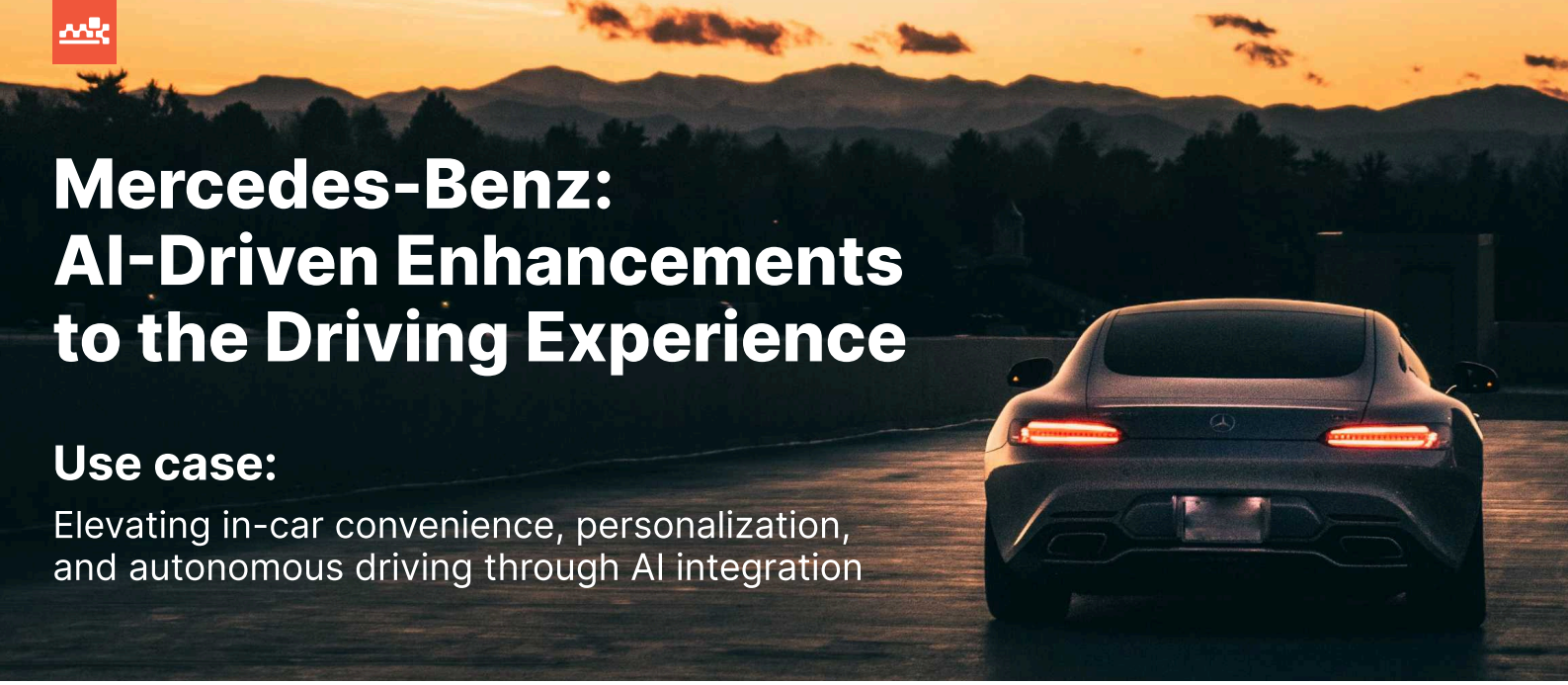
Use case:

Automating tasks and improving decision-making across business processes

Benefits:

- Automates repetitive tasks, freeing employees for strategic work.
- Enhances decision-making with data-driven insights.
- Reduces process time and improves operational efficiency.

Continental integrates AI across workflows to boost productivity and streamline operations. By optimizing routine aspects and enabling evidence-based reasoning, algorithms support R&D, supply chain management, and software engineering. A supercomputer accelerates development timelines, cutting weeks of work into hours.



Mercedes-Benz: AI-Driven Enhancements to the Driving Experience

Use case:

Elevating in-car convenience, personalization, and autonomous driving through AI integration

Benefits:

Delivers intuitive in-car entertainment with AI that learns personal choices.

Enhances navigation clarity with augmented reality overlays.

Advances autonomous driving with hands-free capabilities in specific conditions.

Mercedes-Benz integrates AI across its vehicle lineup to provide a more intelligent, enjoyable, and personalized driving experience.

MBUX:

AI-powered infotainment that understands natural language commands and adapts to user preferences over time.

Augmented reality wayfinding:

Places directional cues atop live camera feeds, offering clearer directions and safer route guidance.

Energizing comfort control:

Adjusts lighting, climate, and seat massage settings based on mood to enhance efficiency and reduce fatigue.

Drive pilot:

Provides level 3 autonomous driving on highways, allowing the auto to handle steering, acceleration, and braking while the driver can focus on other tasks.

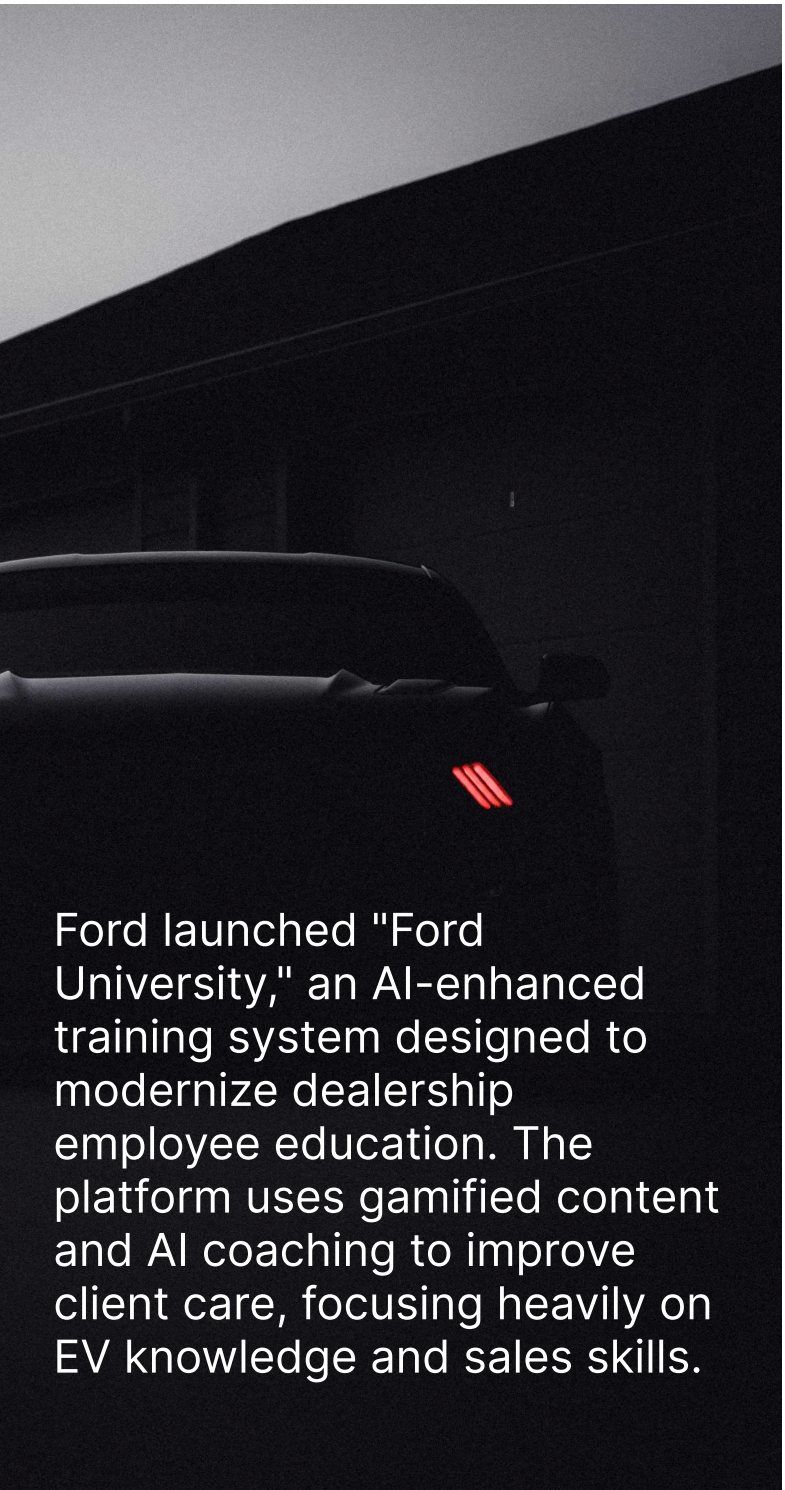
Automated valet parking:

Developed with Bosch, this system enables vehicles to self-park in equipped facilities, reducing the hassle of parking in urban environments.

Ford: AI-Powered Training for Dealership Employees

Use case:

Enriching dealer proficiency and customer service through AI-driven training and gamification



Ford launched "Ford University," an AI-enhanced training system designed to modernize dealership employee education. The platform uses gamified content and AI coaching to improve client care, focusing heavily on EV knowledge and sales skills.

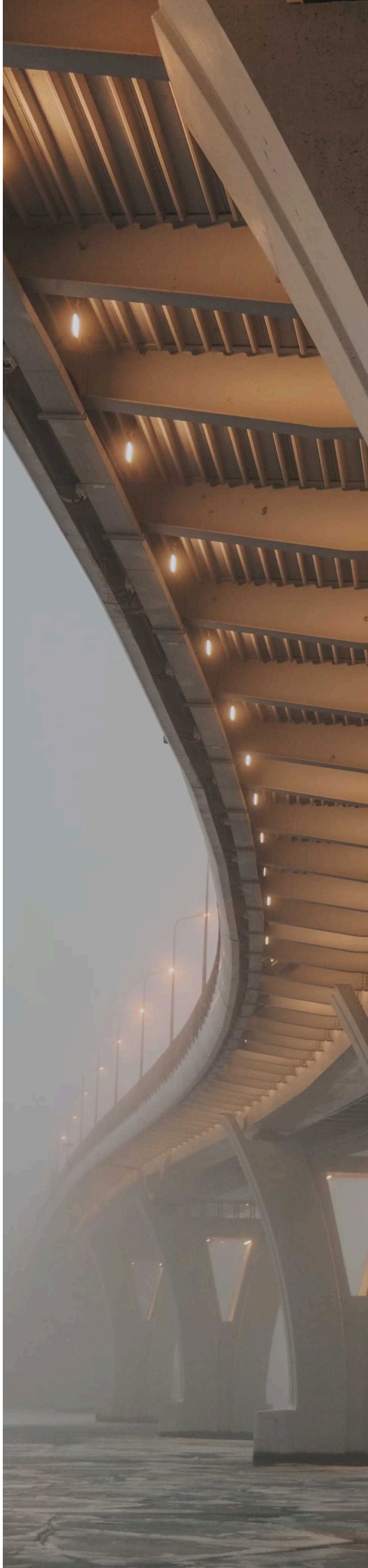
Benefits:

- ☑ Strengthens staff knowledge retention with engaging, video-based learning.
- ☑ Employs AI to personalize the process, identifying strengths and areas for improvement.
- ☑ Prepares dealership team to effectively educate customers on EVs and new technologies.

- → AI evaluates employee performance through practice exercises and video assessments.
- → Training adapts in real time, suggesting new modules based on individual needs.
- → Heavy emphasis on EV models, charging infrastructure, and customer conversations.
- → Scalable across dealership roles, starting with sales and expanding to service departments.

Other Ways AI Powers the Automotive Industry

- Analyze real-time sensor data to predict mechanical issues before they happen.
- Forecast demand, manage inventory, and optimize logistics routes.
- Accelerate the design process by creating multiple iterations.
- Detect driver fatigue, distraction, and health emergencies through facial recognition and biometrics.
- Command robotic arms in factories to automate complex assembly tasks.
- Control and simplify navigation for autonomous delivery and ride-sharing fleets.
- Prognose collisions using sensor metrics and take preventive measures (braking, steering adjustments).
- Analyze traffic patterns and suggest optimal routes.
- Schedule maintenance appointments based on vehicle diagnostics.
- Catch fraud in automotive financing and leasing.
- Automate insurance claims and auto damage assessments.
- Create immersive virtual car configurators for buyers.



AI's ROI in Automotive: The Numbers That Matter

20 - 30%
reduction in maintenance costs and 20–50% decrease in machine downtime is seen through digitization and automation of maintenance processes.

By 2030, highly autonomous vehicles could make up **10–15%** of new car sales.

AI failure prediction boosts equipment availability by **over 20%** and cuts inspection costs by up to 25%.

Robot-human collaboration can raise productivity by **up to 20%.**

AI defect detection is **90% more accurate** than manual inspections.

AI-driven supply chains reduce forecasting errors by **30–50%** and lower inventories by 20–50%.

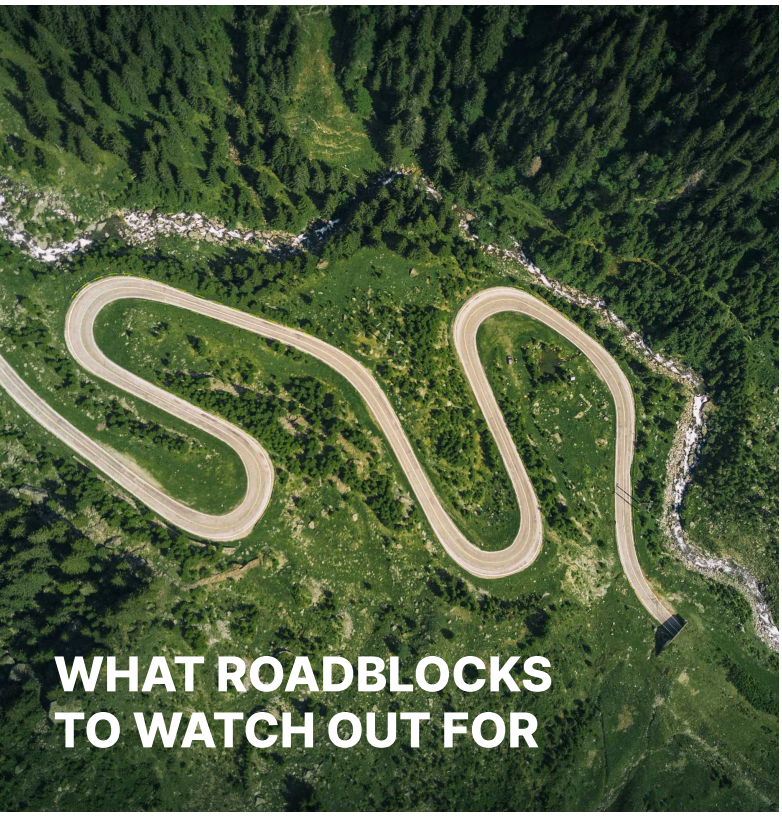
AI accelerates R&D productivity by **10–15%** and reduces time to market by 10–40%.

Automation in business support functions can reach **30%**, with IT service-desk automation hitting 90%.

Autonomous vehicles could reduce traffic accidents, potentially saving **1.24 million lives** globally each year, as well as cut fuel consumption by 10%.

Artificial intelligence can help lower CO2 emissions by **up to 10%** and cut energy costs by 10–20%.

A Roadmap for Safe and Ethical AI Technology Implementation



1. Incorporating artificial intelligence into existing systems poses challenges, often causing **compatibility issues**. This can impede deployment and escalate expenses. Failure to modernize may leave organizations with outdated infrastructure, hindering competitiveness.

2. Implementing the technology necessitates new skill development, potentially triggering resistance or delays. Insufficient training may hinder **employee adaptation**, reducing overall efficiency. Mishandling this transition could diminish morale and productivity.

3. GAI presents **risks regarding privacy infringements and regulatory non-adherence**. Mismanaging these problems causes penalties, litigation, and reputational harm. Additionally, biased algorithms could produce unfair financial decisions.

4. AI models rely on high-caliber information; subpar **data quality** can yield unreliable results. Inconsistent or incomplete datasets may cause flawed predictions and choices, undermining confidence in AI-driven processes and diminishing effectiveness.

5. Models can **perpetuate prejudices** present in training data, leading to discriminatory outcomes. Such biases might affect loan approvals, credit evaluations, and risk assessments. Unchecked partiality can impair an institution's reputation and expose it to legal challenges.

6. Large language systems may generate incorrect or irrelevant outputs, known as **hallucinations**. In finance, this could result in misinformed decisions or erroneous reports, potentially rendering costly mistakes or significant losses.

7. Processing sensitive info with such tools introduces heightened **cybersecurity threats**. A successful breach could compromise customer data, inducing severe monetary and reputational damage. Consequences may also include regulatory sanctions.

8. Without **proper oversight**, AI initiatives may lack clear direction and coordination. This might bring about inefficient resource allocation and unmet strategic objectives. Poor management increases the likelihood of project failure and wasted investment.

Expert Recommendations for Responsible AI Adoption

01 Leverage Zero-Party and First-Party Information:

To boost accuracy, originality, and confidence in language models, firms should prioritize training them using voluntarily shared customer data and info collected directly.

02 Collaborate with Reputable Vendors:

Evaluate potential providers' expertise, ethics, and support capabilities. Teaming up with established companies ensures that deployed solutions are accurate, dependable, and compliant.

03 Maintain Current and Well-Labeled Datasets:

AI model performance hinges on the quality of training material. Organizations should frequently update and correctly tag their data to prevent errors as well as review sets for biases, toxicity, or inaccuracies.

04 Implement Human Supervision:

Human oversight provides contextual understanding and catches potential flaws or harmful outputs. Plus, involving people in reviewing AI-generated content guarantees precision and proper system functioning.

05 Conduct Rigorous, Ongoing Assessments:

Automated reviews and metadata analysis help spot issues, but manual checks are vital for evaluating accuracy and biases. If resources are limited, focus on testing high-risk models and invest in ethical training for staff.

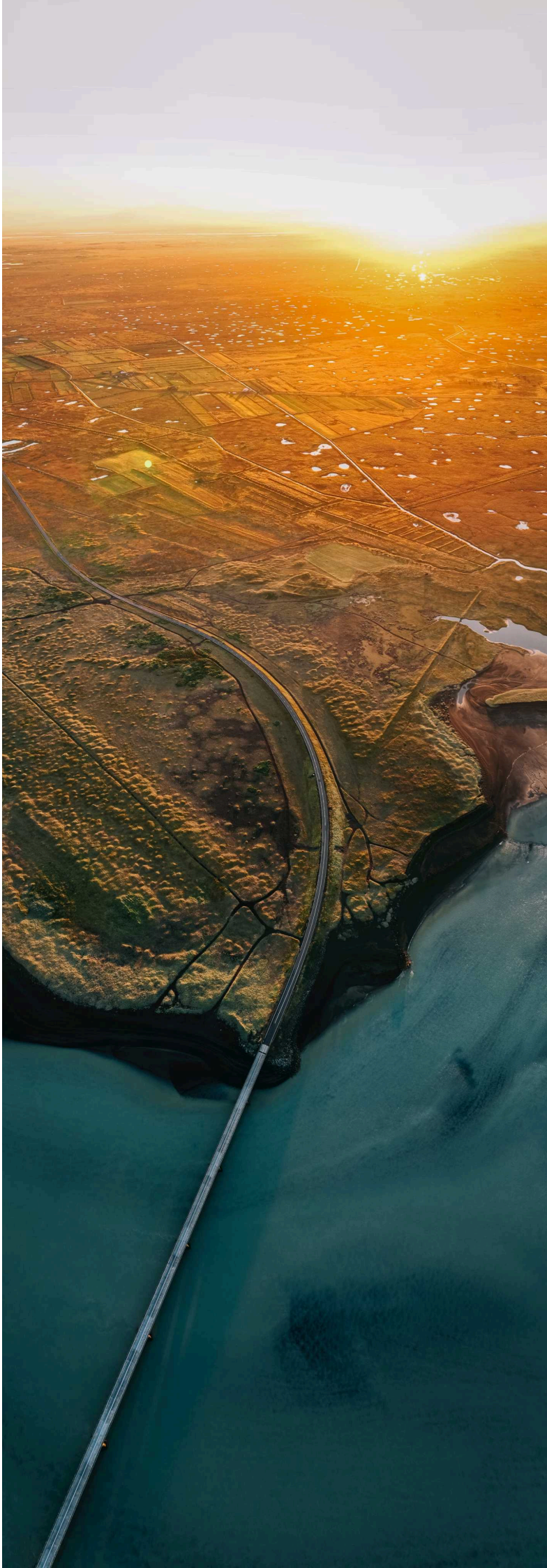
06 Solicit Stakeholder Input:

Actively gathering feedback from users and customers interacting with tools is essential. Promoting open dialogue helps identify improvements, address concerns, and build user trust.

How Master of Code Global Can Empower Your Journey

Our team specializes in both AI development and consulting and we ensure smooth integration and ongoing optimization for your brand. Here is what we bring to the table:

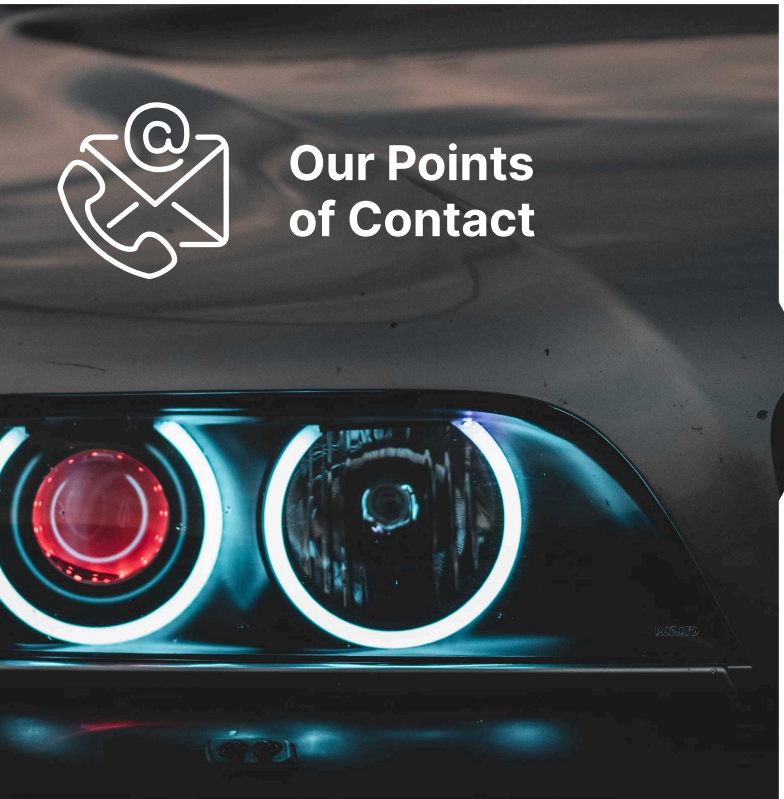
- **Designing custom models** tailored to your unique needs.
- **Integrating AI into internal communication platforms** and productivity tools seamlessly.
- **Developing conversational applications** rounded in your data for accurate and relevant responses.
- Offering strategic consulting on language models to **optimize customer experience** and operational efficiency.
- **Fine-tuning and training LLMs** on your domain-specific records to maximize performance and minimize risks.
- **Providing continuous maintenance** and monitoring to keep your smart apps up-to-date and effective.
- **Helping your teams with AI training** to ensure effective adoption and maximum impact across the organization.



Our Approach to Protecting Your AI-Based Solutions

Our approach to AI projects includes rigorous testing based on the latest methodologies, combined with regular internal training to ensure the highest standards of security.
We incorporate these best practices:

- Input validation and sanitization
- Incident response and recovery plan
- Model fine-tuning and observation
- Access controls and user authentication
- Output filtering and content validation
- Regular security assessments and penetration testing
- Continuous monitoring and improvement
- Data encryption and sensitive information protection



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ABOUT MOCG

At **Master of Code Global** we are a team of experts developing custom world-class digital experiences for web, mobile, as well as conversational chat and voice solutions empowered by AI.

1+ Billion
Users Engaged

4.8/5
Clutch Rating

500+
Projects Delivered

Clutch
4,8/5 rating

ISO 27001
Information Security Management

250+
Masters

56 NPS, 9.2 CSAT
Client Feedback

Work in partnership with

VERINT
glia
Quiq
ada
sinch
cohere
nylas
chatfuel
boost·ai
Infobip
VONAGE
botpress
HumanFirst
Google Cloud
LIVEPERSON
Voiceflow

Trusted by leaders

The New York Times
T-Mobile
TOM FORD BEAUTY
BURBERRY
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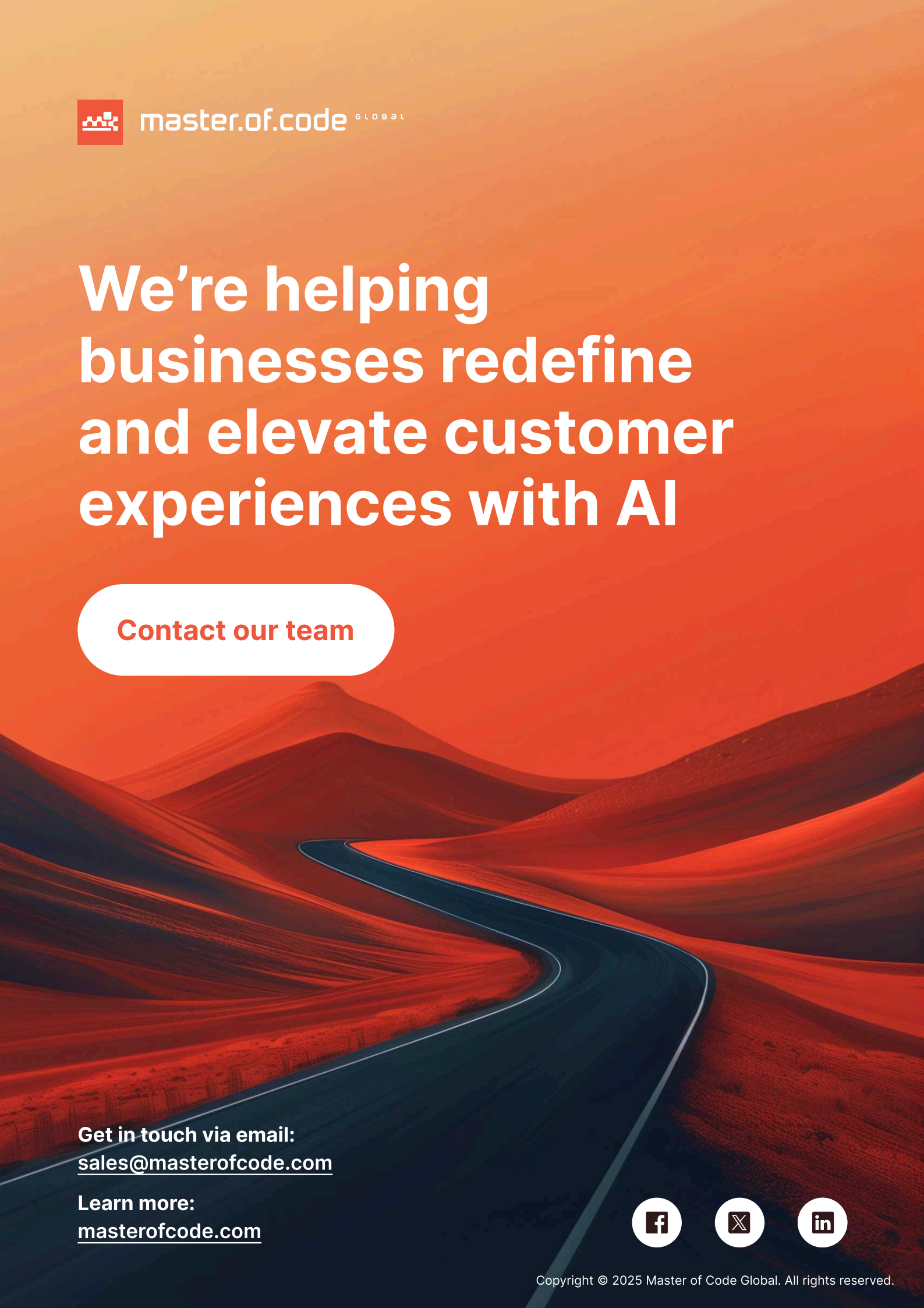
We’re helping businesses redefine and elevate customer experiences with AI

Contact our team



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