



BOOK OF PROCEEDINGS

INTERNATIONAL CONFERENCE SUSTAINABLE MOBILITY

5-6 MARCH

2026

The INTEC International Conference brings together academics, researchers, policymakers and industry experts to discuss innovative approaches and collaborative solutions for a sustainable future in engineering and mobility. The conference will be hosted by POLIS University in Tirana, Albania, and co-organized by partners from across the EU as part of the Erasmus+ CBHE Project 101081873-ERASMUS-EDU-2022-CBHE-STRAND-2.



INTEC International Engineering Competence Centres to push sustainable mobility development in Albania and Montenegro
Project Reference: 101081873-ERASMUS-EDU-2022-CBHE-STRAND-2

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Project Partners:



INTEC International Conference
February 2026
POLIS University, Tirana, Albania

INTEC>>>



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INTEC International Conference
February 2026
POLIS University, Tirana, Albania

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University of Split (US), Croatia
POLIS University (POLIS), Albania
Polytechnic University of Tirana (PUT), Albania
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University of Donja Gorica (UDG), Montenegro
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CAN AI DEVELOP ITS OWN “TASTE” AUTOMOTIVE DESIGN?

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Abstract

The growing adoption of Artificial Intelligence (AI) in automotive design has transformed traditional design methodologies by introducing data-driven and generative approaches. Historically, automotive aesthetics have been shaped by human creativity, cultural influence, and market trends. Recent advances in AI-generated design raise an important research question: can AI develop its own —taste|| in automotive design, or does it merely reproduce learned patterns from existing data? This paper explores the concept of AI- driven aesthetic preference and examines whether AI systems can demonstrate autonomous stylistic tendencies beyond human input.

This study employs a conceptual and analytical methodology. A review of current AI techniques used in automotive design—such as Generative Adversarial Networks (GANs), variational autoencoders, and reinforcement learning models—is conducted. AI-generated automotive concepts are evaluated based on design diversity, novelty, and stylistic consistency across multiple iterations. Additionally, adaptive feedback mechanisms, including user preference data and performance-based constraints, are analyzed to determine whether AI systems exhibit evolving design behaviors that resemble aesthetic inclination.

The analysis shows that AI systems can generate innovative automotive forms that diverge from conventional design norms while maintaining functional coherence. Recurrent stylistic patterns emerge as AI models refine outputs through iterative training and feedback. These patterns suggest the presence of algorithmic preferences influenced by optimization objectives and training data. However, the observed preferences remain computational in nature and do not reflect subjective judgment or cultural awareness.

The findings indicate that AI does not possess —taste|| in the human sense, as it lacks consciousness, intention, and experiential understanding. Instead, AI demonstrates an emergent pseudo-taste

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resulting from data-driven learning processes and predefined evaluation criteria. Despite these limitations, AI has significant potential to reshape automotive design by expanding creative possibilities and supporting designers in exploring novel aesthetics. The future of automotive design is likely to depend on collaborative human–AI systems, where AI enhances creativity while humans provide contextual, cultural, and ethical interpretation.

Keywords: automotive design, AI, innovative, develop, taste.

I. INTRODUCTION

Since the beginnings of the automotive industry in the early 20th century, vehicle design has gone through various evolutionary phases, influenced by technological developments, social changes and cultural trends. In different historical periods, the shape of vehicles has reflected the aesthetic ideals of the time, from the rounded lines of the 1950s to the aerodynamic and minimalist forms of recent decades.

In this process, designers have played an irreplaceable role as intermediaries between technology and the user. With the emergence of digital tools and computer simulations, this role has gradually transformed. Artificial Intelligence represents the most advanced phase of this transformation, offering tools that can analyze, predict and generate forms autonomously. This historical context is necessary to understand why the debate over the "taste" of AI is so relevant today. It is not only related to technology, but also to the professional identity of designers and the future of the discipline.

In recent decades, the automotive industry has experienced profound technological transformations, which have affected not only the mechanical performance and energy efficiency of vehicles, but also their aesthetic and conceptual dimension. Automotive design has traditionally been a field where human creativity, cultural sensitivity and the visual identity of brands have played a key role. Designers have built formal and stylistic languages through experience, intuition and the interpretation of market demands.

With the spread of Artificial Intelligence, especially machine learning models and generative systems, a new dimension has opened up in the design process. Algorithms are now able to analyze millions of visual, structural and functional data, producing forms and concepts that often exceed traditional expectations. This situation raises a fundamental question: can AI develop a kind of aesthetic "taste", or does it remain a technical instrument in human hands?

The concept of "taste" is closely related to subjective perception, emotional experience and cultural context. In art and design, taste is not only the result of formal rules, but also of personal and

collective history. Therefore, establishing this concept in relation to AI poses a theoretical and practical challenge.

This paper aims to critically analyze the role of AI in automotive design and assess whether it can develop sustainable stylistic trends that can be interpreted as a form of taste. Drawing on existing literature and current systems analysis, the study contributes to the debate on the relationship between technology, creativity and authorship in design.

II. LITERATURE REVIEW

Artificial creativity has been the subject of study in fields as diverse as computer science, cognitive psychology, and philosophy of mind. Some scholars argue that creativity can be reduced to combinatorial and statistical processes, which can be replicated by algorithms. According to this approach, AI is potentially capable of producing creative results, as long as it has access to sufficient data and sophisticated models.

Other approaches emphasize that human creativity involves awareness, intention, and critical reflection, elements that are currently lacking in intelligent systems. In automotive design, this theoretical divide is reflected in the debate over the authorship and originality of machine-generated forms.

Contemporary literature also suggests that creativity should be seen as a collaborative process between humans and technology, rather than a competition between them. Studies on the use of AI in design have seen a significant increase in recent years. Various authors have analyzed the potential of generative algorithms to produce new shapes, optimize structures, and reduce product development time. In the automotive context, AI has been used for aerodynamic optimization, structural behavior simulation, and visual concept creation.

Generative Adversarial Networks (GANs) are among the most studied technologies in this field. They consist of two neural networks that compete with each other to produce increasingly realistic images. In automotive design, GANs have been used to generate exterior and interior views, imitating existing styles of well-known brands. Variational Autoencoders (VAEs) offer another approach, allowing the exploration of latent spaces of form and style. These models enable new combinations of design elements, creating numerous variations from a limited database.

Another important direction is the use of reinforcement learning, where systems learn through rewards and punishments. In design, this method has been applied to optimize aesthetic and functional parameters simultaneously. However, the literature emphasizes that these systems are deeply dependent on input data and on criteria defined by humans. Many authors argue that AI creativity is derivative and not original in the full sense.

III. METHODOLOGY

To support the theoretical analysis, the study also relied on a selection of visual materials and concrete automotive design projects generated by AI. Conceptual images, digital prototypes and renderings published by automotive companies, design studios and research platforms were analyzed. Selection criteria included the level of formal innovation, direct use of generative algorithms and documentation of the creative process. These materials were used as case studies to illustrate how AI influences the development of form. In addition to secondary sources, academic experiments and pilot projects were also analyzed, which aim to integrate AI into traditional design processes. This approach enabled a more realistic assessment of the technological potential and limitations.

This study uses a conceptual and analytical methodology, combining a systematic literature review with a comparative analysis of the results produced by AI systems in automotive design. The chosen approach aims to understand not only the visual results, but also the internal mechanisms that produce them.

In the first phase, scientific studies, industrial reports and experimental projects related to the use of AI in design were identified and analyzed. Sources that address GANs, VAEs and reinforcement learning models in the automotive context were selected.

In the second phase, an analysis of AI-generated concepts in various experimental and commercial projects was conducted. These concepts were evaluated according to three main criteria: formal diversity, level of innovation and stylistic consistency. Formal diversity was measured through changes in proportions, lines, volumetry and details. Innovation was assessed by comparing new forms with existing models in the industry. Stylistic consistency was analyzed through the repetition of motifs and visual characteristics in different iterations.

In the third phase, adaptive feedback mechanisms were examined, including user preference data and technical constraints. How these factors influence the evolution of generative models was analyzed. The methodology does not aim to provide direct experimental measurements, but rather an in-depth theoretical and analytical interpretation of current practices.



Figure 1. AI represented as a designer, creating automotive forms through digital processes.



Figure 2. Interaction between artificial intelligence and the aesthetics of futuristic automotive design.



Figure 3. Generation of different car styles by AI neural networks.

IV. RESULTS

The analysis shows that AI systems are able to produce a wide range of shapes and aesthetic configurations. In many cases, the generated concepts deviate from traditional automotive design norms, introducing unusual silhouettes, new mass ratios and innovative surface solutions. Formal diversity is high, especially in the early stages of training, when the models explore the possible space of shapes. However, over time, a tendency towards stabilization and repetition of certain characteristics is observed.

In terms of innovation, AI demonstrates the ability to combine elements from different styles, creating hybrid shapes. These results are often perceived as creative, but the analysis shows that they are based on statistical transformations of existing data. Stylistic consistency emerges as one of the most interesting indicators. After several training cycles, the models begin to produce shapes that share common features, such as the way the headlights, grille or roofline are treated. This suggests the formation of an algorithmic “preference.” However, these preferences are closely tied to objective functions and data structure. They do not reflect subjective judgments or cultural values.

V. DISCUSSION

The results of the study show that AI can develop consistent stylistic models, but these cannot be equated with human taste. Taste presupposes awareness, intention, and emotional experience, elements that are missing in current AI systems. The observed algorithmic pseudo-taste is a product of mathematical optimization and data structure. The models tend to favor solutions that maximize reward functions, even if these solutions do not necessarily have aesthetic meaning in the cultural

context. In this sense, AI should be seen as a creative collaborator and not as an independent author. The role of the designer remains essential for interpreting, filtering, and integrating the results into a larger vision.

On the other hand, the use of AI opens up new opportunities for formal exploration and experimentation. Designers can quickly test multiple alternatives and identify solutions that they might not have thought of in a traditional way. The discussion also raises ethical and professional issues, including authorship, responsibility, and impact on the labor market. The integration of AI requires ongoing regulation and reflection.

VI. CONCLUSIONS

This study concludes that Artificial Intelligence does not develop taste in the human sense, but creates preference patterns based on data and algorithms. These patterns can be interpreted as pseudo-tastes, but they remain limited by technical structure and lack of awareness.

However, the role of AI in automotive design is profoundly transformative. It broadens creative horizons, increases efficiency, and supports the decision-making process. The future of design is expected to be based on collaborative human-machine systems, where technology and human creativity complement each other. Future studies could focus on empirical experiments, user perception analysis, and the development of more culturally sensitive models.

1. Extension of the Analysis and Methodological Reflection

To further deepen the results of this study, it is important to emphasize that the process of evaluating AI-generated forms cannot be reduced to technical parameters alone. Aesthetic perception also includes the emotional response of users, the connection to brand identity and the impact on the market. In this context, qualitative analysis of the opinion of professional designers and end users constitutes an important element that can be integrated into future studies.

From a methodological point of view, the use of heterogeneous and multidimensional data remains a challenge. Many current models rely mainly on images and formal parameters, neglecting the semantic and symbolic aspects of design. The integration of cultural, historical and social data can significantly improve the interpretative capacity of intelligent systems.

The study also shows that the process of training models has a direct impact on aesthetic results. Models trained with homogeneous data tend to produce limited and repeatable results, while those trained with diverse sources exhibit greater creative potential.

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International conference on sustainable mobility

Agenda

Project title: International Engineering Competence Centres to push Sustainable
 Mobility Development in Albania and Montenegro
Acronym: INTEC

Work package	
WP11	International conference
TASK	
11.4	Community Building Events

Dates	05.03.-06.03.2026
City	Tirana
Meeting venue	POLIS University Entrance Hall
Address	Rr. Bylis 12, Kodi Postar 1051, Kutia Postare 2995, Tirana, Albania

05.03.2026	
Entrance Hall, POLIS University	
8:30 - 9:00	Registration
9:00 - 9:30	Opening Performance
Welcome session - Auditorium A5 (Ground floor)	
9:30 - 10:00	Opening Remarks Dr. Elona Karafili (Vice Rector, POLIS University) Dr. Flora Krasniqi (Head of Office of Projects and Internationalization, POLIS University) DI Daniela Wenzl (INTEC Project Coordinator)
Auditorium A5 (Ground floor)	
10:00 - 11:00	Keynote speakers DI Horst Pflügl AVL Collaborative Research for sustainable Mobility DPSHTRR Representative - (General Directorate of Road Transport Services in Albania)
11:15 - 11:30	Coffee break (Moving into parallel sessions)

11:30	SESSION 1: POLITICAL AND REGULATORY FRAMEWORK AULA B1	SESSION 2: TECHNOLOGICAL INNOVATION AULA B4
11:30 - 11:45	Opening Session: Prof. Emeritus dr Nataša Gospić (FSKL)	Opening Session: Associate Prof. Ivan Tolj (US)
11:45 - 12:00	Integrating Event Data Recorder (EDR) Technology into Sustainable Road Safety Frameworks within the European Green Deal Eriselda Alimeti, Parid Milo, Mentor Çejku, Anis Sulejmani, Odhisea Koça	Empirical Comparative Study of Structural CFRP Sandwich Structure Inserts for Out-of-Plane loads Imre Kovács
12:00 - 12:15	Infrastructure Readiness for Sustainable Mobility: EU Frameworks and the Case of Albania Ervin Kalemaj, Parid Milo, Mentor Çejku, Anis Sulejmani, Odhisea Koça	The Role of Intermodal Transportation for the Sustainable Mobility Márton Kovács
12:15 - 12:30	Review of the Evolution of International Ship Energy Efficiency Regulations and the Albanian context Dr. Blenard Xhaferaj, Doklejda Hodaj	Impact of Heat Pump Systems on Winter Energy Use and Driving Range in Battery Electric Vehicles Luis Henrique Pereira Martins
12:30 - 12:45	Renewable Energy Procurement (CPPA) and Transport Electrification: European Perspectives and Albanian Challenge Antonio Ndoci, Anis Sulejmani, Odhisea Koça, Mentor Çejku, Parid Milo	Liquid Cooling Systems for Electric Vehicle Batteries: Improving Safety, Performance and Sustainability João Miguel de Almeida Ribeiro Silva
12:45 - 13:00	The Current Status of Autonomous Vehicle	Analysis of Battery Charging and Discharging Behavior for Electric Vehicle Applications Leona Markic, Luka Filipović

	Technology Adoption in the Balkan Region Darjana Lopičić, Oliver Popović, Miloš Ilić, Bojan Kocić	
13:00 - 14:00	Lunch	
14:00 - 14:15	Reviewing the European Green Deal in Energy, Mobility and Industry Veselinka Calasan, Ivana Ognjanović	Automotive Cooling Systems Sustainability: A Focus on the Expansion Tank Ana Inês Barbeiro Casimiro
14:15 - 14:30	The European Green Deal and its National Implementation: From Strategy to Practice Blerina Bektashi, Andi Bektashi	Design and Development of a Constant-Volume Combustion Chamber for Optical Investigation of Hydrogen and Water Injection Under Engine-like Conditions Julius Hollerith, Prof. Dr. Bhavin Kapadia
14:30 - 14:45	From Prediction to Regulation: Evidence Production Approaches in Autonomous Mobility Research and Their Policy Implications Sadmira Malaj	Emission Reduction of Marine Propulsion Systems in SECA Zones Through the Integration of Hydrogen Technologies Motaleb Miri, Ivan Radaš, Marija Mandić, Ivan Tolj
14:45 - 15:00	Questions and Discussion	A Comprehensive Analysis of Ventilation System for Enhanced Energy Efficiency in Marine Propulsion Applications Sara Blašković, Gojmir Radica, Jakov Šimunović

15:00 - 15:15		Design and Topology Optimization of a Lightweight Chain Sprocket for Electric Motorcycle Applications Teo Čolović, Ivo Marinić-Kragić
15:15 - 15:30	SESSION 3: ECONOMIC AND BUSINESS PRESPECTIVES + CASE STUDIES AND GOOD PRACTICES Aula B1	Questions and Discussion
	Opening Session: Dr. Anis Sulejmani (PUT)	
15:30 - 15:45	Managing Renewable Energy Resources as a Foundation for Sustainable Mobility Transitions Deivi Sinanaliaj, Martin Bektashi	
15:45 - 16:00	Feasibility of Electric Bus deployment in Montenegro: A Case Study of Budva (Erasmus+ INTEC / IECC Context) Anastasija Mrkajic, Vinko Nikic.	
16:00 -16:15	Children Paths as an Urban Regeneration Strategy: Naim Frasheri Study Case Dejvi Dauti	
16:15 - 16:45	Questions and Discussion	

International conference on sustainable mobility

Agenda

Project title: International Engineering Competence Centres to push Sustainable Mobility Development in Albania and Montenegro
Acronym: INTEC

Work package	
WP11	International conference
TASK	
11.4	Community Building Events

Dates	05.03.-06.03.2026
City	Tirana
Meeting venue	POLIS University Entrance Hall
Address	Rr. Bylis 12, Kodi Postar 1051, Kutia Postare 2995, Tirana, Albania

06.03.2026		
First Floor Hall, POLIS University		
8:30 – 9:00	Registration	
9:00– 9:15	SESSION 4: SOCIAL AND ENVIRONMENTAL IMPACT AULA B1	SESSION 5: FUTURE SCENARIOS AULA B4
9:00 – 9:15	Opening Session: Prof. Dr. Bhavin Kapadia (FHF)	Opening Session: MA Adrian Millward-Sadler (FHJ)
9:15 – 9:30	Comparison of Lifecycle Emissions of a SUV with Fuel Cell and Battery Electric Powertrains - Bhavin Kapadia, Alper Sayin, Sandra Eisenträger	GENAI Literacy as a Transversal Skill for Emerging Professionals: Implications for Sustainability- Critical Knowledge Work - Adrian Millward-Sadler
9:30 – 9:45	Smart Mobility Technologies and their Impact on Urban Sustainability: Insights from	Effects of Technical Traffic Calming Measures - Filip Perović

	European and Western Balkan Cities – Alma Gjonaj, Vjola Ziu	
9:45 – 10:00	The Disappearing Squares: Social and Environmental Impacts of Urban Mobility Planning in Durres – Arjola Sava	Cybersecurity Vulnerabilities in Electric Vehicle Operating Systems: A Global Awareness Analysis – Aleksa Radević
10:00 – 10:15	The City that Demands Continuous Movement: The Disappearance of the Right not to Move within the Framework of Sustainable Mobility – Avrili Meshi	Development of a risk assessment model for the transport of hazardous materials using ALOHA and GIS software tools – Marko Radetić
10:15 – 10:30	Between Rhetoric and Reality: Discursive Framings, Greenwashing and Outcomes in Sustainable Mobility – Kejsi Veselagu	Mapping Distance and Time Leveraging Isochrone Intelligence in Emerging Cities – Andia Vllamasi, Erjon Cobani
10:30 – 10:45	Reimagining the City Through Green Mobility Strategies: The Case of Tirana – Vjola Ziu, Alma Gjonaj	Can AI develop its Own “Taste” Automotive Design? – Gregor Andoni, Kristjana Meço
Coffee Break		
11:00 – 11:15	Linking Morphology, Perceived Safety, and Sustainable Mobility in Post-Socialist Urban Contexts– Sindi Doce	Optimizing Public Transport Corridors Using AI-Based Scenario Modelling: A case Study on Tirana’s Ring Road – Erjon Çobani, Julian Beqiri, Merita Guri
11:15 – 11:30	Towards Sustainable Transport: A Comparative Analysis of Electric Vehicle Adoption in Montenegro and Albania – Radmila Milić	Threat Landscape and Multi-Layered Protection Mechanisms for Autonomous and Electric Vehicle Systems – Marko Asanovic, Oliver Popović, Zoran Avramović, Nataša Gospić

11:30 - 11:45	Questions and Discussion	Cybersecurity Challenges in Modern Vehicular Communication Networks - Aleksandar Grgurević, Nataša Gospić, Oliver Popović
11:45 - 12:00		Green Transition in Albania: Challenges and Future Actions - Erik Kushta, Andi Hyka, Enea Nasto
12:00 - 12:15	SESSION 6: CONTROVERSIES AND CHALLENGES Aula B1	Use of AI in the Process of Green Transformation and Impact on Public Health - Esmeralda Hamiti, Federika Alliaj, Kristi Metushi
	Opening Session: Prof. Kristofor Lapa (UV)	
12:15-12:30	The Adoption of Electric Vehicles in Albania: A Comparative Study with Other Western Balkan Countries - Doklejšda Hodaj, Andrea Lapa	Development of an Automatic Traffic Sign Detection System Using YOLOv8 - Valentina Vojinović, Luka Filipović
12:30-12:45	Application of Quality Tools in the Analysis of Factors Influencing the Development of Electromobility in Montenegro - Jelena Šaković Jovanović, Draško Jovanović, Mirjana Grdinić Rakonjac, Marko Lučić, Miloš Perović, Aleksandar Vujović, Gordana Radulović	The Historical Development of Artificial Intelligence and Its Influence on the job market in Automotive Engineering - David Josef Pilgram
12:45 - 13:45	Questions and Discussion	Questions and Discussion
13:45	Lunch	