UNIVERSITI TEKNOLOGI MARA

EXTENDED ABSTRACT

DKA 2025

InVICCAID 2025
1ST INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING

MONDARIKA

NIAT
NORTHERN INNOVATION ACADEMIC TOUR

Design Innovation Academic Show 2025

Organized by

Faculty of Art & Design
#perubahanluarbiasa
#ADpilihanpertama

UNIVERSITI TEKNOLOGI MARA
Fakulti Seni Lukis & Seni Reka
Cawangan Kedah

UiTM di hatiku

Collaboration with

PUSAT SAINS NEGARA WILAYAH UTARA

KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

EXTENDED ABSTRACT

'Design Innovation Academic Show 2025

DIAS 2025 (Design Innovation Academic Show) is all about "Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st Century Education." This vibrant program shines a spotlight on how creativity and innovation are reshaping modern education.

It consists of three key components. First up is the Mindareka Design Show, an exhibition that showcases students' final year projects and creative designs, giving them a chance to connect with industry professionals and the wider community. Next, we have the Northern Innovation Academic Tour (NIAT), which takes participants on an academic adventure to select institutions and innovation centers in the northern region, aimed at promoting knowledge sharing and building strong academic and professional networks.

Finally, there's the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID), a global competition that recognizes outstanding practices in teaching and learning by blending art, technology, and innovative design. But DIAS 2025 is more than just a talent showcase; it's a powerful platform for empowering both students and educators, while also strengthening collaborations between universities, creative industries, and global communities. With its inclusive and interdisciplinary approach, this initiative strives to spark relevant, competitive, and impactful ideas and innovations that truly benefit society and push the future of education forward.

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Design Innovation Academic Show 2025

Prof. Dr. Roshima Haji Said
Acting Rector
UiTM Kedah Branch

Rector's Message

I am delighted to extend my heartfelt congratulations to the College of Creative Arts, UiTM Kedah Branch, for bringing MINDAREKA 2024 - Unleashing Your Visual Creativity to fruition. The triumphs of past MINDAREKA editions undoubtedly fueled the organization of this year's event, making MINDAREKA 2024 a reality.

MINDAREKA 2024 - Unleashing Your Visual Creativity stands as a testament to the dedication of students at the College of Creative Arts, UiTM Kedah Branch, providing them with a platform to showcase their final art projects. Beyond serving as a space for the exploration of fresh, innovative, and entrepreneurial concepts, this exhibition is poised to connect aspiring talents with potential clients and employers.

I extend my sincere gratitude to all participants whose enthusiasm and support have contributed to the success of MINDAREKA 2024 - Unleashing Your Visual Creativity. Their unwavering belief and commitment have truly brought this event to life, marking it as a resounding triumph!

Head of Faculty Message

Mohamat Najib Mat Noor
Head of Faculty
Faculty of Arts & Design
UiTM Kedah Branch

It is an honour to introduce DIAS 2025 – Design Innovation Academic Show, held under the theme "Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st-Century Education." This significant event reflects the faculty's ongoing commitment to fostering a culture of innovation, critical thinking, and creative exploration among our students and academic community. As we navigate the complexities of the 21st century, it becomes increasingly clear that education must go beyond traditional boundaries to embrace multidisciplinary approaches that are both relevant and future-forward.

The three core components of DIAS 2025, Mindareka Design Show, Northern Innovation Academic Tour (NIAT), and the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID)which is serve as vital platforms to highlight the convergence of design, technology, and pedagogy. These initiatives not only empower our students to showcase their talents and ideas, but also create opportunities for engagement with industry leaders, academic peers, and global collaborators. The Mindareka Design Show celebrates student creativity and innovation through compelling final year projects. NIAT fosters knowledge sharing and institutional partnerships through academic visits and exchanges, while InViCCAID offers international recognition for excellence in integrating art and design into teaching and learning.

I would like to express my deepest appreciation to the organising committee, faculty members, students, and strategic partners who have worked tirelessly to bring this programme to life. Your dedication and collaborative spirit have made DIAS 2025 a reality and a reflection of our shared vision for transformative education. It is my hope that this platform will continue to inspire meaningful dialogue, cultivate groundbreaking ideas, and spark a new wave of innovation that enriches both education and society.

Industrial Design (Bachelor)

Microcar For Sustainable Commuting Among Yuppies In Kuala Lumpur

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ABSTRACT

RAYZR is a futuristic microcar concept designed to address the evolving commuting needs of young urban professionals (yuppies) in Kuala Lumpur. As the city grapples with persistent traffic congestion, limited parking infrastructure, and increasing environmental concerns, RAYZR offers a sustainable, compact, and visually dynamic transport solution. This project blends aggressive styling with urban practicality, resulting in a design that resonates with the lifestyle and aspirations of yuppies, a group highly attuned to efficiency, technology, and style RAYZR adopts a two-layered silhouette with a rear shell-like structure to enhance both visual identity and perceived safety. The microcar's design not only fulfills daily commuting needs but also aligns with national sustainability goals, particularly SDG 9 (Industry, Innovation & Infrastructure) and SDG 11 (Sustainable Cities & Communities)). Through integrated design thinking and user research, RAYZR presents itself as a progressive alternative to traditional personal vehicles, blending form, function, and future mobility in one compelling package.

Keywords: Microcar, commuting, Young Urban Professional, Kuala Lumpur, Traffic congestion, Limited Parking, Environmental concern, sustainable, compact, SDG

INTRODUCTION

The urban fabric of Kuala Lumpur is rapidly evolving in response to growing population density, economic expansion, and lifestyle shifts. With this urban growth comes a significant set of challenges that have long plagued the city, including traffic congestion, limited availability of parking, unreliable public transport, and rising air pollution levels. These issues are particularly burdensome for young urban professionals or yuppies who are highly mobile, career-focused, and often commute between multiple

city zones for work, meetings, and social engagements. According to Visvanathaiyer (2018), yuppies value both time efficiency and lifestyle expression, making them early adopters of smart mobility solutions.

Microcars represent a viable alternative to conventional transport, offering ease of navigation in tight urban streets, lower environmental impact, and better parking flexibility (Siddiqi, 2023). However, despite their practicality, microcars have not yet gained mainstream traction in Malaysia. This may be due to factors such as safety concerns, limited availability of models, or a cultural preference for larger vehicles. RAYZR was designed to challenge those perceptions by offering an urban vehicle that feels secure, stylish, and expressive.

The vehicle inspired by a two-layer attached aesthetic, with the upper body appearing to "float" above the compact chassis. This gives it a sporty and agile appearance. At the rear, the shell-like structure wraps around the passenger area to evoke a feeling of protection. This directly addresses common concerns about microcar safety (Loustric & Matyas, 2020). The result is a visual language that merges emotional design with functional necessity. As Kuala Lumpur aims to become a smart city aligned with SDG principles, RAYZR stands as a prototype for how local design can address both user behavior and systemic urban issues (Tham & Anuar, 2013).

METHOD

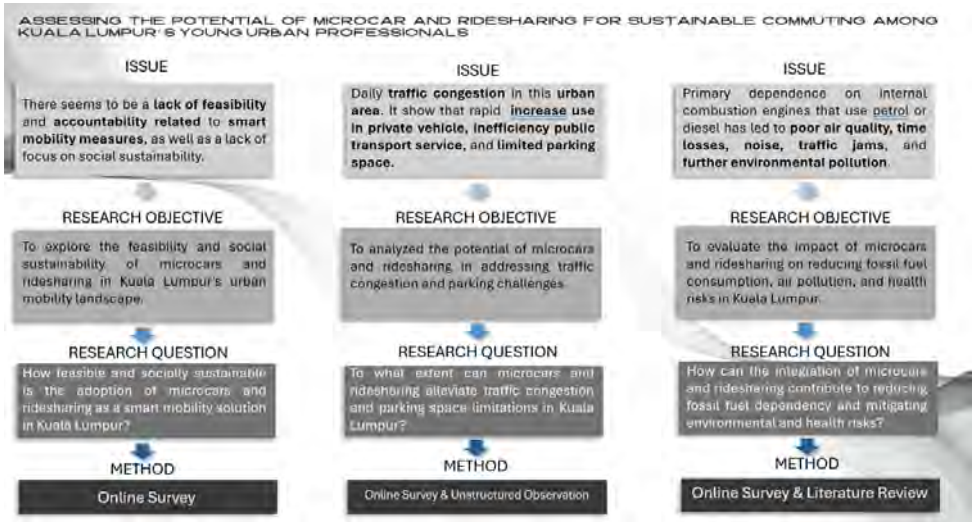

Figure 1 Research Design Method

The development of the RAYZR microcar was informed by a research-driven design process rooted in both qualitative and quantitative data. A mixed-method approach was applied to ensure the concept responded to real urban conditions and user expectations. Firstly, an online survey was conducted with young professionals in Kuala Lumpur aged 20 to 40. The survey focused on their commuting habits, views on microcar adoption, and openness to sustainable transport options. Results indicated that over 64.7% of respondents were willing to consider microcars for daily commuting, and 80.4% agreed that microcars could solve parking issues in crowded areas. Furthermore, 76.5% believed that microcars and ridesharing could reduce traffic congestion and pollution in the city.

Complementing the survey, unstructured observations were conducted in high-traffic zones such as Bukit Bintang, Petaling Street, and Bangsar South. These locations were selected due to their high density of office buildings, entertainment hubs, and limited parking availability. Field notes were used to document user behavior, types of vehicles present, and the typical flow and density of traffic during peak hours. This qualitative data helped validate the spatial challenges faced by yuppies, especially the need for maneuverable, space-efficient vehicles that can handle narrow city roads and tight parking spaces.

In addition, secondary sources such as news reports and urban development publications were consulted to frame the macro-level context of transportation planning in Kuala Lumpur. Reports from the New Straits Times and The Star highlighted the economic cost of traffic inefficiency, with drivers losing over 159 hours annually due to peak-hour traffic (Malay Mail, 2023). These insights contributed to shaping the compact dimensions and electric propulsion of RAYZR. They reinforced its relevance to real-world mobility patterns. Together, these methods established a strong foundation for a design solution that is both research-backed and user-centered.

CONCLUSION AND RECOMMENDATION

As cities continue to evolve toward smart and sustainable futures, microcar designs like RAYZR can play a transformative role in redefining personal mobility. However, their success depends not only on innovative design but also on ecosystem support

from infrastructure and policy. Therefore, the integration of RAYZR into Kuala Lumpur's mobility network would require a collaborative strategy involving local government, mobility service providers, and vehicle manufacturers.

Firstly, we recommend that the city invest in designated microcar parking zones, particularly in high-density commercial areas. These compact parking lots can be equipped with electric charging stations to support the transition toward EV-based commuting. Urban planners should integrate such infrastructure into future smart city blueprints, particularly in strategic transit-oriented developments.

Secondly, financial incentives such as EV purchase rebates, tax exemptions, or subscription-based ownership models should be introduced. These initiatives would lower the entry barrier for first-time young buyers who may find current EV options unaffordable despite being environmentally inclined (Nurul Hidayana et al., 2019).

Furthermore, ridesharing platforms can be encouraged to integrate microcars into their fleet. This would offer flexible options for users who prefer compact vehicles for short-distance travel. Combined with smart apps and IoT connectivity, microcars could become part of a seamless urban mobility chain alongside scooters, public buses, and MRT systems (Mohammadi-Mavi et al., 2024; Osman & Yusoff, 2020).

In conclusion, RAYZR embodies a new design direction that combines urban functionality with youthful expression. It is sporty, compact, secure, and sustainable. The vehicle meets not only the functional needs of KL yuppies but also their desire for identity and efficiency. Through a form that is bold yet purposeful, RAYZR reflects a design philosophy that treats mobility as a lifestyle experience rather than a purely utilitarian task. As cities like Kuala Lumpur aspire to reduce traffic congestion, promote low-emission transport, and create inclusive infrastructure, microcars like RAYZR offer a realistic and visionary step forward. The collaboration between research, design, and city planning will be essential in turning these concepts into tangible urban solutions that support both people and the planet.

Figure 2 Design Direction

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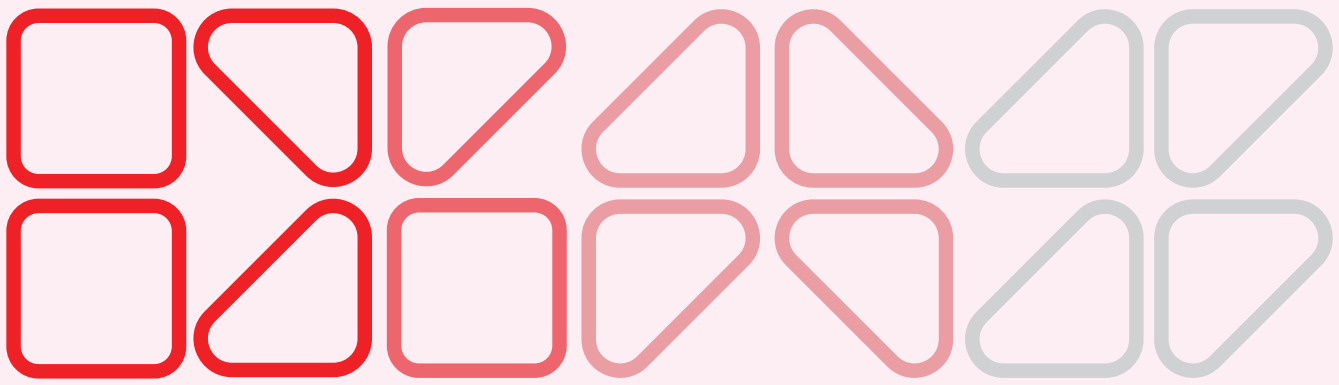

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