

Advancing Innovation through Interdisciplinary Research and Digital Solutions

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This issue of the journal *Ingenious* brings together a diverse range of research contributions that reflect the rapid technological advancements shaping the future of our societies. As the world faces unprecedented challenges, including climate change, cyber threats, and the growing demands of digital transformation, this issue highlights innovative solutions and multidisciplinary approaches that aim to foster sustainability, resilience, and inclusive growth.

Each article demonstrates the authors' commitment to exploring how emerging technologies, from artificial intelligence (AI) and deep learning to advanced networking and cybersecurity solutions are revolutionizing sectors such as engineering, information technology, industrial maintenance, and environmental science.

This issue features research on a variety of timely and practical topics, including:

An innovative approach to music personalization through the development of a mood-aware playlist generator, leveraging Spotify's API to enhance user engagement.

A study on the impact of chatbot technology in digital university platforms, using UetBot as a case study, which shows improved administrative workflows and student support services.

Simulation and mitigation strategies for Distributed Denial-of-Service (DDoS) attacks using Python, providing hands-on tools for testing and resilience-building in network security.

A comparative analysis of VPN technologies in surveillance-heavy environments, evaluating WireGuard, OpenSSH, and Radmin VPN in terms of encryption, usability, and anonymity.

The implementation of Mask R-CNN and OpenCV for automated inspection of Volvo heavy machinery parts, reducing costs and increasing precision in maintenance cycles.

The calibration of high-accuracy energy meters using advanced test systems, contributing to smarter energy distribution and greater transparency in billing.

A platform design named DevConnect that merges social media with technical forums, promoting IT problem-solving and professional networking.

A systematic statistical analysis of very hot days (above 35°C) in Tirana over a decade, linking urban temperature trends to climate change and urbanization effects.

What unites these diverse contributions is their shared focus on practical impact. Each article not only advances academic knowledge but also offers viable solutions to real-world problems faced by today's industries, educational institutions, and municipalities.

By bridging technical innovation with social relevance, the authors have provided research that speaks to the broader goals of sustainable development, digital transformation, and interdisciplinary cooperation. The inclusion of voices from engineering, computer science, urban studies, and education further highlights the importance of a cross-sectoral approach to innovation.

Importantly, several articles in this issue are the result of close collaboration between professors and students, emphasizing the journal's commitment to fostering research skills and academic engagement among the next generation of professionals.

The topics explored throughout this issue and the conclusions drawn from them, serve as a catalyst for meaningful discussions among researchers, industry experts, and policymakers. They invite reflection on how we can collectively harness emerging technologies to build a more sustainable and inclusive future. The diverse backgrounds of the contributing authors, spanning academia, industry, and public policy, underscore the importance of interdisciplinary collaboration in tackling complex, real-world problems. Their insights offer valuable guidance and inspiration for anyone seeking to leverage technological innovation in the pursuit of sustainable solutions that benefit both society and the environment.