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Editorial

2024 and 2025 Feature Papers from Future Internet's Editorial Board Members

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1. Introduction

As indicated on the journal's website, *Future Internet* fosters contributions to the future Internet ecosystem, which, in turn, is expected to lead to significant improvement in well-being in all spheres of human life (private, public, professional). In this context, several aspects play a key role towards the improvement of the future Internet ecosystem, especially in three main areas: smart system technologies and architecture, smart systems and applications, and human-centered networked systems. Specific topics of interest for this Special Issue, dedicated to the Editorial Board Members of *Future Internet*, include the following.

- Computer networking/communications and information systems, to support efficient information collection and transfer.
- Internet of Things, to support the integration of (smart) objects inside future Internet ecosystems.
- Big data and augmented intelligence, instrumental to efficiently processing the collected data, in order to make information transfer more efficient, especially from the perspective of final "consumers".
- Smart systems, which typically involve a combination of multiple technologies, architectures, and applications.
- Network virtualization and edge/fog computing, which represent promising technologies for managing future networks.
- Cybersecurity, which represents a transversal topic of paramount importance for future Internet applications.

As shown below, the proposed contributions, went beyond the themes outlined above, investigating many other aspects associated with the future Internet.

2. Contributions

The papers included in this Special Issue of *Future Internet* highlight some of the emerging issues associated with the topics highlighted above and are the subject of intense ongoing research activity by our Editorial Board Members.

The first paper [1] introduces LeapNP (Learning and Planning Framework for Numeric Problems), a lightweight, Python-native framework engineered to support both classical and numeric planning tasks.

The second paper [2] focuses on Generative AI (GenAI) as an enabler of synthetic realities and discusses the incurred risks.

The third paper [3] provides a comprehensive analysis of State Of Charge (SOC) spoofing attacks and introduces a novel unsupervised detection framework based on the One-Class Support Vector Machine (OCSVM) algorithm.

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The fourth paper [4] investigates the energy-aware optimization of truck–drone collaborative delivery systems, with a particular focus on the mathematical formulations of the Mixed-Integer NonLinear Problem (MINLP) and linearization of drone energy consumption constraints.

The fifth paper [5] investigates machine learning-based intrusion detection for CAN Bus-based Internet of Vehicles (IoV) environments using the CICIoV2024 dataset.

The sixth paper [6] investigates the deployment of Deep Learning (DL) models for network intrusion detection on resource-constrained IoT devices, using the public CICIoT2023 dataset.

The seventh paper [7] presents the design of G-IDSS (Graph-based InnoCyPES Data Storage Service): a novel, distributed data storage service that is built around a P2P network overlay to support the handling of distributed data.

The eighth paper [8] proposes LSCNet (Lightweight Shallow Feature Cascade Network), a novel lightweight architecture designed for UAV edge computing to handle aerial object detection tasks.

The ninth paper [9] introduces a comprehensive framework that integrates both technical and policy-based factors to assess a website's level of privacy protection.

The tenth paper [10] focuses on sentiment analysis and compares the performance of zero and few-shot approaches with traditional fine-tuning approaches of tourism-related texts in Mexican Spanish.

The eleventh paper [11] proposes a novel Reversible Data Hiding (RDH) scheme specifically designed for encrypted HSIs, offering enhanced embedding capacity without compromising data security or reversibility.

The twelfth paper [12] provides a comprehensive review of how Large Language Model (LLM)-driven agents support advanced reasoning strategies, adaptive learning, and collaborative annotation efforts.

The thirteenth paper [13] presents a Value of Information (VoI)-based trajectory planning framework for a single Autonomous Underwater Vehicle (AUV) operating in coordination with an Unmanned Surface Vehicle (USV) to collect data from multiple Cluster Heads (CHs) deployed across an uneven seafloor.

The fourteenth paper [14] examines multi-lexical data sources, utilizing an extracted dataset from an open-source corpus and the Global Terrorism Datasets (GTDs), to predict lexical patterns that are directly linked to terrorism.

The fifteenth paper [15] presents a novel mechanism, Distributed Reputation for Accurate Misbehavior Reporting (DRAMBR), offering a fully integrated reputation solution that utilizes reputation to enhance the accuracy of the reporting system by identifying misbehavior in rural networks.

The sixteenth paper [16] introduces Covert Command and Control (C3), a novel Command and Control (C2) framework designed to enhance operational security and minimize detection.

The seventeenth paper [17] aims to target researchers, industry professionals, and policymakers involved in AI development and deployment, providing actionable insights for designing robust, secure, and transparent AI marketplaces.

The eighteenth paper [18] proposes an integrated Human–Robot Interface (HRI) with a network congestion control algorithm at the application level for the conservative transmission of images, using the Robot Operating System (ROS) framework, in order to teleoperate robots in harsh environments.

The nineteenth paper [19] proposes the integration of personalized, sensor-equipped facemasks with gamification in order to improve compliance with the orthodontic treatment.

The twentieth paper [20] offers a comprehensive review of the critical role and future potential of integrating unmanned aerial vehicles (UAVs) and reconfigurable intelligent surfaces (RISs) to enhance Internet of Vehicles (IoV) systems within beyond-fifth generation (B5G) and sixth generation (6G) networks.

The twenty-first paper [21] introduces a novel approach for heart disease prediction using the TabNet model, which combines the strengths of tree-based models and deep neural networks in federated environments.

The twenty-second paper [22] focuses on detecting the stance of content producers—whether they support or oppose the subject of the content—using advanced text-mining models that leverage pre-trained language models enhanced with meta features derived from headlines and article bodies.

The twenty-third paper [23] presents a comparative analysis of the speed of convergence of the sequential FRUGAL-1U, FRUGAL-2U, and EASYQUANTILE algorithms and the design and analysis of parallel, message-passing-based versions of these algorithms that can be used for monitoring network latency quickly and accurately.

The twenty-fourth paper [24] introduces a novel scheme for recompressing Vector Quantization (VQ) indices, enabling lossless restoration of the original indices during decoding without compromising visual quality.

The twenty-fifth paper [25] describes the results of the European project OHIO (Odin Hospital Indoor cOmpass), aimed at enhancing the maintenance of medical equipment through a central management web application and an indoor Real-Time Location System (RTLS) for mobile devices.

The twenty-sixth paper [26] presents a novel approach that combines blockchain technology and the InterPlanetary File System (IPFS) to achieve non-repudiation and data integrity in the MQTT protocol.

The twenty-seventh paper [27] proposes a Multi-Agent Proximal Policy Optimization (MAPPO) algorithm to maximize the communication services provided by a limited number of drones to the ground User Equipment (UE) within a certain time frame while minimizing the drone energy consumption.

The twenty-eighth paper [28] explores a comprehensive three-dimensional problem space to thoroughly analyze the IoT's applications in irrigation systems.

The twenty-ninth paper [29] introduces the INFLUTRUST framework, that is designed to address challenges in trust-based influencer marketing campaigns on Online Social Networks (OSNs).

In the thirtieth paper [30], two novel techniques, Multi-Group Partition (MGP) and Closest Pair Prediction (CPP), are proposed to improve the performance in reversible data hiding in encrypted 3D mesh models.

The thirty-first paper [31] introduces a Credit Card Fraud Detection (CCFD) system that integrates Federated Learning (FL) with blockchain technology.

Conflicts of Interest: The authors declare no conflict of interest.

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