IEEE SC Hyper-Intelligence TC Newsletter

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Technical Activities: International Conference Organization

We are organizing a variety of activities related to the theme and different aspects of hyper-intelligence. A series of international conferences that HITC is actively involved in this year include:

- IEEE Smart World Congress 2023. 28-31 Aug - Portsmouth, UK. *link*;

- The 20th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The 20th IEEE Autonomous and Trusted Vehicles Conference (ATC 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The 23rd IEEE International Conference on Scalable Computing and Communications (ScalCom 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The 2023 IEEE International Conference on Digital Twin (Digital Twin 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The 9th IEEE International Conference on Privacy Computing and Data Security (PCDS 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The 2023 IEEE International Conference on Metaverse (Metaverse 2023). 28-31 Aug - Portsmouth, UK. *link*;

- The International Conference on Embedded Wireless Systems and Networks (EWSN 2023). 25-27 Sep 2023 - Rende, Italy. *link*;

- International Conference on Systems, Man, and Cybernetics (SMC 2023). 1-4 Oct - Maui, Hawaii. *link*;

- The 5th International Conference on Blockchain Computing and Applications (BCCA 2023). 24-26 Oct 2023 - Kuwait City, Kuwait. *link*;

- The 8th IEEE Cyber Science and Technology Congress (CyberSciTech 2023). 13-17 Nov 2023 - Abu Dhabi, UAE. *link*;

- The 21st IEEE International Conference on Pervasive Intelligence and Computing (PICom 2023). 13-17 Nov 2023 - Abu Dhabi, UAE. *link*;

- The 9th IEEE International Conference on Cloud and Big Data Computing (CBDCom 2023). 13-17 Nov 2023 - Abu Dhabi, UAE. *link*;

- The 21st IEEE International Conference on Dependable, Autonomic & Secure Computing (DASC 2023). 13-17 Nov 2023 - Abu Dhabi, UAE. *link*;

- The 2023 IEEE Cybermatics Congress (Cybermatics 2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

- The 9th IEEE International Conference on Smart Data (SmartData 2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

- The 16th IEEE Conference on Internet of Things Computing (iThings-2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

- The 16th IEEE International Conf. on Cyber, Physical and Social Computing (CPSCom 2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

- The 19th IEEE International Conference on Green Computing and Communications (GreenCom 2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

- The 6th IEEE International Conference on Blockchain (Blockchain 2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*.

- The 2023 IEEE International Conference on Advanced Cloud and Big Data (CBD-2023). 15-18 Dec 2023 - Ocean Flower Island, Hainan, China. *link*;

During these conferences, several famous scientists and distinguished researchers will be invited to give keynote speeches, to share their latest technical achievements, specific working experience, distinctive life perception, regarding key aspects closely related to hyper-intelligence in both academic and industrial fields.

Technical Activities: Workshops and Special Sessions Organization

- The 2nd Workshop on DIStributed COLlective Intelligence (DISCOLI 2023). *link*;

- The 1st International Workshop on Machine Learning for Autonomic System Operation in the Device-Edge-Cloud Continuum (MLSysOps 2023). *link*;

- The 2nd International Workshop on Hybrid Internet of Everything Models for Industry 5.0 (HIEMI 2023). *link*;

- The 2nd Workshop on Security and Privacy in Connected Embedded Systems (SPICES 2023). *link*;

- The 1st International Workshop on Trusted and Reliable Embedded Wireless Environments (TREWE 2023). *link*;

- Workshop on Attacks and Software Protection at ESORICS 2023. *link*.

- Special Session 4: Data Fusion for Industry 5.0 at the 26th International Conference on Information Fusion (FUSION 2023). *link*;

- Track: Quality Aspects of Digital Transformation at the 16th International Conference on the Quality of Information and Communications Technology (QUATIC 2023). *link*.

Journals and Special Issues

It is our great honor that our special issue proposals have been approved in several journals:

- *Journal of Systems Architecture.*
  Special issue on Distributed Learning and Blockchain Enabled Infrastructures for Next Generation of Big Data Driven Cyber-Physical Systems. link.
  Guest Editors: Xiaokang Zhou, Giancarlo Fortino, Carson Leung, Mohammad Hammoudeh.

- *IEEE Transactions on Consumer Electronics.*
  Special Section on Smart Data Driven Modeling for Emerging Customer Applications in Mobile Edge Computing. link.
  Guest Editors: Xiaokang Zhou, Flavia C. Delicato, Kevin Wang, Vincenzo Piuri.

Hyper-Intelligence News

Some HI-related news are posted on the HITC website:

- *ChatGPT is fun, but not an author. link*
  In less than 2 months, the artificial intelligence (AI) program ChatGPT has become a cultural sensation. It is freely accessible through a web portal created by the tool's developer, OpenAI. The program—which automatically creates text based on written prompts—is so popular that it's likely to be "at capacity right now" if you attempt to use it. When you do get through, ChatGPT provides endless entertainment...

- *ChatGPT Gets Fresh Competition. link*
  Just over two months ago, OpenAI released ChatGPT to the public, instantly thrusting the A.I.-powered chatbot into the center of mainstream discourse, with debates about how it could transform business, education and more. (It also spurred Microsoft to invest $10 billion in OpenAI.) Now Google and the Chinese tech giant Baidu have unveiled their own chatbots, hoping to convince the world their efforts in so-called

generative A.I. — tech that can spout off conversational text, make images and more — are just as ready for prime time…

- *What ChatGPT and generative AI mean for science. [link](#)*
  In December, computational biologists Casey Greene and Milton Pividori embarked on an unusual experiment: they asked an assistant who was not a scientist to help them improve three of their research papers. Their assiduous aide suggested revisions to sections of documents in seconds; each manuscript took about five minutes to review. In one biology manuscript, their helper even spotted a mistake in a reference to an equation. The trial didn't always run smoothly, but the final manuscripts were easier to read — and the fees were modest, at less than US$0.50 per document.

ChatGPT, New Bing, and other related

Since the big attention that these instruments are attracting, we asked ChatGPT 4 to write an article about these new disrupting technologies. The article is in the following.

ChatGPT, New Bing, and the Rise of AI-powered Tools

Artificial intelligence (AI) has been making significant strides in recent years, revolutionizing various industries and changing the way we interact with technology. One area where AI has made a significant impact is natural language processing (NLP), enabling machines to understand, interpret, and generate human-like text. This article will explore some of the most popular AI-powered tools, including ChatGPT, New Bing, and other related platforms.

ChatGPT: Conversational AI at its Finest

ChatGPT, developed by OpenAI, is an advanced language model that leverages cutting-edge AI to understand and generate human-like text. As a sibling to the popular GPT-3 model, ChatGPT is designed for open-domain conversation and aims to produce contextually relevant and coherent responses to user inputs.

Powered by large-scale machine learning models, ChatGPT has become an invaluable tool for a wide range of applications, such as customer support, content generation, tutoring, and more. Its versatility has made it a favorite among developers, who can now easily build AI-powered chatbots and other conversational agents.

New Bing: The Next-Generation Search Engine

New Bing, an innovative search engine, combines the power of AI with traditional search algorithms to deliver highly relevant and personalized search results. Harnessing the potential of NLP, New Bing understands the context and intent behind users' queries, providing results that closely match their information needs.

This AI-driven approach has made New Bing more than just a search engine. It now offers an interactive experience, with the ability to answer questions directly, offer suggestions, and even engage in natural language conversations with users. As a result, New Bing has gained popularity among users who appreciate its ability to provide accurate and contextually relevant information.

Other AI-powered Tools

Aside from ChatGPT and New Bing, there are numerous other AI tools that have emerged, each with its unique capabilities and applications. Some of these include:

1. **Hugging Face Transformers**: An open-source library that provides state-of-the-art NLP models, enabling developers to build powerful AI applications for tasks like text classification, translation, and summarization.
2. **DeepL**: A translation tool that employs deep learning techniques to offer highly accurate translations between multiple languages, surpassing the quality of traditional translation services.
3. **AI Dungeon**: A text-based adventure game that leverages GPT-3 to generate interactive, immersive, and dynamic storytelling experiences, allowing players to explore limitless possibilities.
4. **Grammarly**: An AI-powered writing assistant that provides real-time grammar, punctuation, and style suggestions to help users create clear, concise, and error-free text.

Conclusion

The rise of AI-powered tools like ChatGPT, New Bing, and others has transformed the way we interact with technology and access information. By leveraging the power of NLP and other AI techniques, these tools have created new possibilities and opportunities in various sectors, from customer support and content creation to search and entertainment. As AI continues to advance, we can expect even more innovative and impactful tools to emerge in the future.

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We sincerely welcome more people to join the new TC for a collaborative effort and exploration to the novel but challenging field in Hyper-Intelligence. Please feel free to promote, and invite your colleagues and friends who are interested in it to apply to join HITC by: https://ieee-hyperintelligence.org/join_us