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AI-eXplained (AI-X)

Hi all,
I have an exciting new development to report to you that has been a joint collaboration between CIS and IEEE staff teams across multiple OUs. Together, we are introducing to the IEEE a new type of article that is being labeled “immersive”. Our original foray into immersive articles will appear in this publication and have an educational orientation. We call the category AI-eXplained (AI-X). Essentially, educators who are building interactive educational software to teach aspects of computational and artificial intelligence* can now find a peer reviewed venue for those efforts. This is so cool. A two page extended abstract will appear in both the printed and online versions of the magazine, but the magic happens inside Xplore. The “real” paper is viewed like a supplement and contains all of the immersive components to bring this material to life, allowing the reader to directly interact with the content. It’s much better to experience a concept than to read an explanation. Note the (purposeful) similarity of our name, AI-X, to the popular research topic XAI (eXplainable AI). Even though both concern explaining, the difference is that the former is an educational enterprise while the latter is a research topic. The very first such manuscript is in this issue of CIM. The paper is titled “Choosing Representation, Mutation, and Cross-over in Evolutionary Algorithms” by Alexander Dockhorn and Simon Lucas (who first posed the challenge to me for CIS to produce interactive articles). Please look at the abstract, but really have some fun trying to solve the 8-Queens problem and explore how one can do it through evolutionary computation in the immersive content. This paper went through a rigorous review process designed for such contributions and will have the same publication credentials as any other published manuscript in CIM.

I want to thank Prakash Bellur (Senior Director, Platform Management) of IEEE and his whole team for creating the environment within IEEE Xplore to host



Jim needed a tie for the exchange of the “tie of friendship” with the President-elect of INNS at WCCI 2022.

*If you want to see my views of the two fields of CI and AI, see my President’s Message in the August 2022 issue of CIM.

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immersive articles, and to all the dedicated CIS volunteers who have made the articles themselves a reality.

Want to get in on the action? Look for an upcoming webinar and a call for a special issue of CIM that will have all the technical details. If you can't wait, contact me or the CIM EiC, Chuan-Kang Ting, and we can get you enough information for you to move forward. There are some additional immersive AI-X papers in the works from CIS people who saw the great potential of immersive articles. We're hoping this becomes a regular feature of CIM going forward.

But why stop with AI-X? We are now considering how to add immersive supplements to papers published in any of our publications. Want readers to understand the sensitivity of an algorithm to particular parameters or choices of models? Why not let them explore the algorithm as they read the paper? Or how about this – immersive posters? The possibilities abound!

Speaking about being immersive and interactive in a different context, after a two year drought, CIS concluded its first mostly in person committee meeting series and the World

Congress on Computational Intelligence in Padua, Italy. Many thanks to Alessandro Sperduti, Marco Gori, their whole organizing committee, and volunteer team for a very successful and enjoyable experience in a beautiful setting. I was struck with how many good things happen in between formal sessions because people are together. I'm hoping this interaction continues with our Symposium Series on Computational Intelligence in Singapore in early December.

As always, feel free to contact me at kellerj@missouri.edu with your thoughts, suggestions, questions, and innovative ideas. Please stay safe and healthy. I hope to see many of you as we try to emerge from the pandemic.



Call for Papers for Journal Special Issues

Special Issue on "AI eXplained (AI-X)"

Journal: *IEEE Computational Intelligence Magazine*

Guest Editors: Pau-Choo (Julia) Chung, Alexander Dockhorn, and Jen-Wei Huang

Submission Deadline: January 31, 2023

https://cis.ieee.org/images/files/Documents/call-for-papers/cim/CIM-SI-AIX_CFP2.pdf

Special Issue on "Resource Sustainable Computational and Artificial Intelligence"

Journal: *IEEE Transactions on Emerging Topics in Computational Intelligence*

Guest Editors: Joey Tianyi Zhou, Ivor Tsang, and Yew Soon Ong

Submission Deadline: February 1, 2023

https://cis.ieee.org/images/files/Publications/TETCI/SI26_CFP_RSCAI.pdf

Special Issue on "Trusted Mobile Crowdsourcing for Next Generation Intelligent Transportation Systems"

Journal: *IEEE Transactions on Emerging Topics in Computational Intelligence*

Guest Editors: Muhammad Usman, Mian Ahmad, Xiangjian He, and Manuel Roveri

Submission Deadline: February 1, 2023

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