Automation for Good

Matthew Guggemos, M.S. CCC-SLP

The transformative potential of instrumentive AI in healthcare and education

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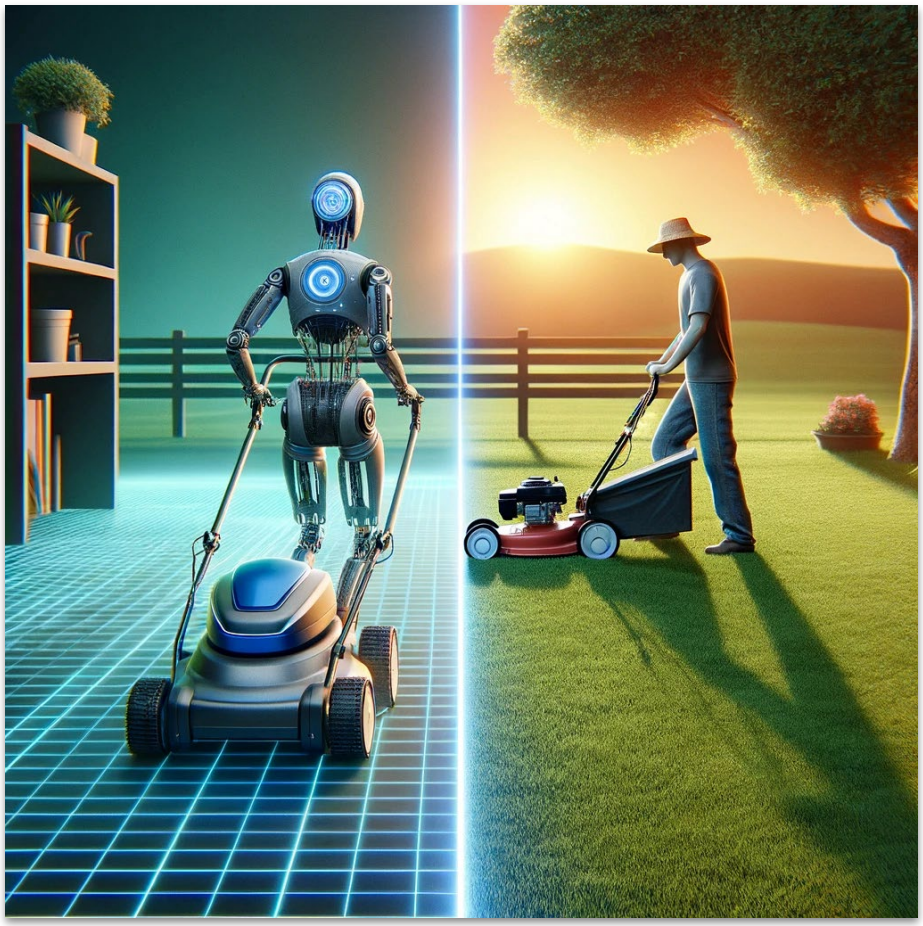
Agentive vs Instrumentive AI



Agentive AI makes autonomous decisions; instrumentive AI empowers human capabilities.

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Leveraging Instrumentive AI

Automating administrative tasks could enhance patient care and clinician well-being.

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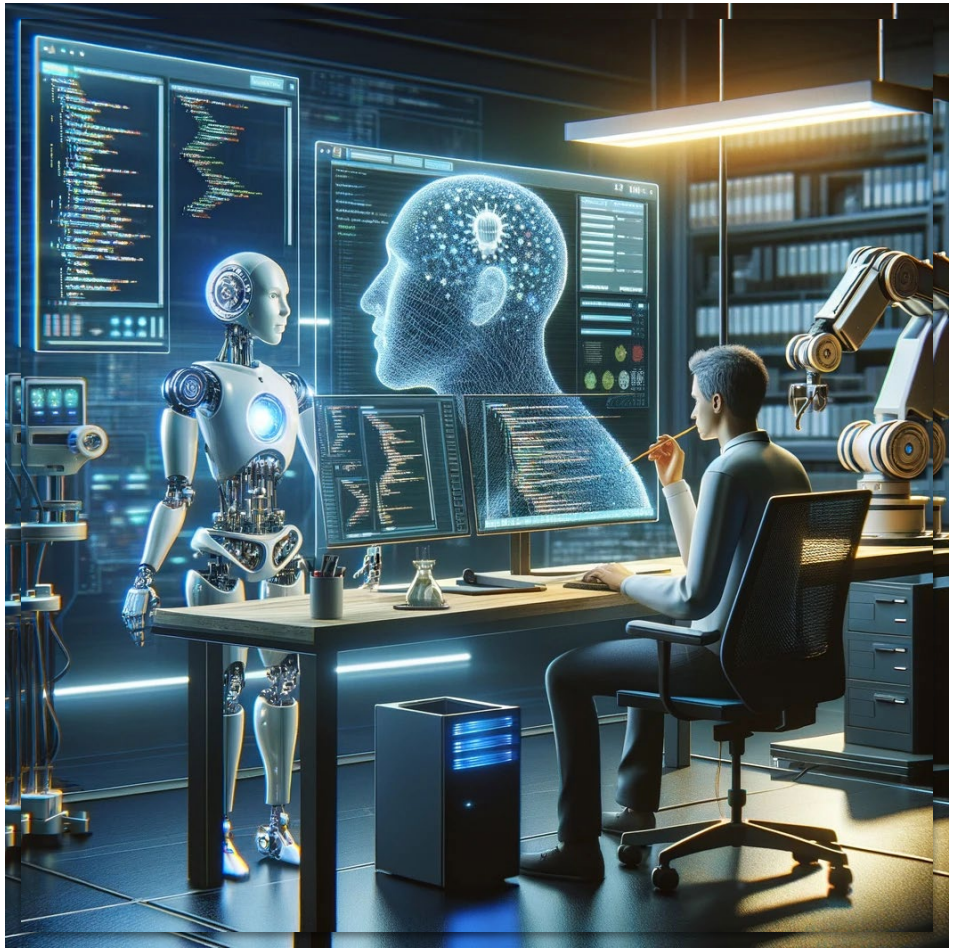
Building Trust in Instrumentive AI



Human oversight and collaborative development are key to trustworthy AI.

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The Future of Instrumentive AI

In what ways can interdisciplinary approaches push the boundaries of AI to help solve current and future problems?

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Call to Action

Integrate instrumentive AI to empower professionals and transform lives.

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Conclusion

Instrumentive AI can be a catalyst for human-centered benefit.

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References

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Matthew Guggemos
Conflict of Interest Statement

I am a co-founder and Chief Technical Officer of iTherapy, LLC, a company that has developed InnerVoice, an AI-powered communication app. InnerVoice is discussed in my presentation as an example of instrumentive AI in healthcare and education.

Additionally, I serve as the Chief Technology Officer for the Evaluative Artificial Speech Intelligence-Autism Screener (EASI-AS) project, an NSF SBIR Phase 2 grant focused on developing an AI tool for early autism screening using speech analysis. The EASI-AS project is also mentioned in my presentation to illustrate the potential of instrumentive AI in reducing clinician burnout and improving patient outcomes.

I have been involved in several research projects as a principal investigator or co-investigator, including NSF and NIH grants exploring technologies such as virtual reality, machine learning, and speech analysis for autism intervention and communication disorders. These projects have received funding from various sources, including the National Science Foundation, National Institutes of Health, Microsoft, and Autism Speaks.

Furthermore, I am a co-owner and co-publisher of Autism Digest, a publication that provides information and resources for the autism community.

While my professional and financial interests are closely related to the topics addressed in this workshop, I have made every effort to present an objective and balanced perspective based on my expertise in speech-language pathology, technology development, and autism intervention. The opinions and insights expressed in my presentation are my own and do not necessarily represent those of my company, funding agencies, or affiliated institutions.

My goal is to contribute to an informed discussion on the potential benefits, challenges, and implications of AI applications in neuroscience and healthcare, while fostering collaboration among researchers, clinicians, individuals with lived experience, and the public.

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