Joint SSP and sensometrics WORKSHOP: Artificial Intelligence in Sensory Practice: Separating Promise from Hype

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The rapid evolution of computational technology has sparked excitement in the ability of artificial intelligence (AI) to provide never-before-considered solutions and insights. The nebulous nature of the term "AI," along with the deep technical knowledge AI seemingly requires, has resulted in high expectations – what *can't* AI do? And, while most agree the true power of AI will be unleashed when humans and machines work seamlessly together - each leveraging the strengths of the other - how will that goal be realized in sensory practice? This workshop separates the promise from the hype.

In Part 1, **Amanda Grzeda** shares within-business experiences. First, how to effectively translate AI excitement into strong business questions. Next, how to source the right domain knowledge, which likely lies across multiple individuals who represent different departments and functions. Then, how to cast the net wide enough with regard to metadata - considering what's relevant today, and what might be relevant in the future. Finally, with a model in-hand, how to best play the role of the human in the human-machine interface. Data modeling is not new to us, but given the focused attention, our ability to communicate it effectively must evolve.

In Part 2, **John Ennis** discusses how, whenever a new general-purpose technology - such as steam, electricity, digital computing, or AI - appears, industrialists must decide how to transform. One option, "fast caterpillar," is to continue in one's present activities, leveraging the new technology to increase output. The second option, "beautiful butterfly," is to use the new technology to produce results previously unattainable. In this part, Dr. Ennis reviews how AI makes both options available to sensory scientists and provides recommendations on how to balance these options to provide business benefits while effectively preparing for the future.

In Part 3, **Leah Hamilton** discusses opportunities and challenges in incorporating existing AI technologies into novel solutions for sensory science. Language-standardization training or analysis is often the bottleneck in sensory research, making the rapid analysis of thousands of words of natural language using AI an exciting prospect. There are great opportunities and challenges in using existing tools for novel sensory applications, as demonstrated through a case study that used descriptors from 6,598 reviews of international whiskies to create a flavor wheel. This talk highlights the power of using domain expertise to adapt existing AI, rather than reinventing the wheel.

The workshop concludes with panel discussion and open Q&A.