Sudhi Ranjan Sinha will be a keynote at the 2020 DSI Annual Conference taking place November 21 – 23 online. As prelude to his keynote, he offers the following:

The Evolving Intelligent Society and Emerging Challenges

Today, we live in the Algorithmic Age and have been doing so for some time now. The pervasiveness of technology in every walk of life and business is enabling us to have new levels of consciousness around the consequences of insights and decisions that we may make. Whether we choose to do so or not, we now have the tools to migrate towards a more intelligent society. Data, digital technologies, and AI are the key pillars of this transition. While the society is experiencing this shift towards intelligence today, academia foresaw this more than 60 years back. The current COVID-19 crisis has heightened the significance of AI in tackling key issues ranging from pandemic management to healthcare research to socio-economic interventions.

The impact of AI on businesses has been significant and will continue to become more severe. Businesses are flooded with significantly more information than they were ever exposed to and ready to deal with. Information is now coming from the connectivity of their devices and processes, inputs from users, and other types of transactional data that is getting generated every second. On top of that, they are in a complicated competitive environment that is rapidly transforming as technology is reducing the barriers of historical knowledge, access, and infrastructure required by businesses to be successful. Businesses now have to compete for users' attention every second and use that opportunity to demonstrate better value than others. Businesses also need to quickly innovate around their business models and services to avoid being disrupted.

Every industry is rich with examples of how AI has been transforming fundamental business models and disrupting existing market structures. For example:
- San Francisco start-up Stitch Fix has flipped mass production concepts in fashion into a business model around lot size of one
- Amazon Go is reinventing store of the future with increasingly high degrees of automation and efficiency enabled by computer vision, sensor fusion, geo-fencing, and use of AI
- Bee'ah's Office of the Future in the UAE anticipates the building's environmental and operational needs to adapt the different building systems for most optimal functioning
- Autonomous driving
- Drug discovery (project code-named DSP-1181) for OCD by British start-up Exscientia in collaboration with Japanese pharmaceutical firm Sumitomo Dainippon Pharma

This transition into an intelligent society brings many challenges that require serious academic intellect and multi-disciplinary research to solve them. Many are urgent and pertinent, such as:
- Ethics in AI – how do we create a society that does not disadvantage sections based on technological access and bias in decision making?

- Cybersecurity and privacy – how do we protect the individual and institutions in a completely digital world?
- Contextualization – how do we adaptively build a correlation between disparate data to create context around a situation?
- Experiences – how do we create immersive experiences with high-degree of reliability using techniques like CNLP and mixed reality systems?
- Adaptive business systems – how do we create significantly more adaptiveness in business models, processes, and systems to react better to new stimuli?

We are in the early days of an exciting long-haul journey where we will have to reimagine a very different world than we live in today, requiring a tighter synergistic synthesis of academia and industry.

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