AIRE
AI for Information Retrieval and Extraction

Overview

Information is knowledge, information is money, information is power. Unlike before, a huge amount of information is freely available on the Web today. In an era of social connectedness, in fact, people are becoming increasingly enthusiastic about interacting, sharing, and collaborating through social networks, online communities, blogs, Wikis, and other online collaborative media. In recent years, this collective intelligence has spread to many different areas, with particular focus on fields related to everyday life such as commerce, tourism, education, and health, causing the size of the Web to expand exponentially.

The distillation of knowledge from such a big amount of unstructured information, however, is an extremely difficult task, as the contents of today's Web are perfectly suitable for human consumption, but remain hardly accessible to machines. The opportunity to capture opinions and intentions of the general public about social events, political movements, company strategies, marketing campaigns, and product preferences has raised growing interest both within the scientific community, leading to many exciting open challenges, as well as in the business world, due to the remarkable benefits to be had from marketing and financial market prediction.

Course Details

Lecture 1: Introduction to AI
- Symbolic AI (AI 1.0)
- Sub-symbolic AI (AI 2.0)
- Neurosymbolic AI (AI 3.0)

Lecture 2: Introduction to IR
- Boolean retrieval
- Tolerant retrieval

Lecture 3: Data representation
- Semantic networks
- Vector space model

Lecture 4: Data classification
- Classification
- Vector quantization
- Data fusion

Lecture 5: Applications
- Natural language processing
- Sentiment analysis
- Social network analysis
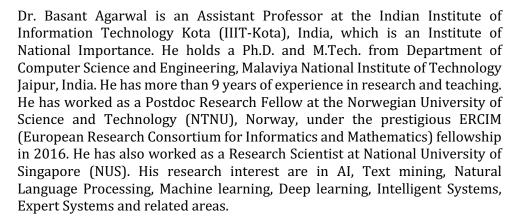- Multimodal data analysis

Teaching Faculty

Erik Cambria is the Founder of SenticNet (business.sentic.net), a Singapore-based company offering B2B sentiment analysis services, and an Associate Professor at NTU, where he also holds the appointment of Provost Chair in Computer Science and Engineering. Prior to joining NTU, he worked at Microsoft Research Asia (Beijing) and HP Labs India (Bangalore) and earned his PhD through a joint programme between the University of Stirling and MIT Media Lab. His research focuses on neurosymbolic AI for explainable natural language processing in domains like sentiment analysis, dialogue systems, and financial forecasting. He is recipient of several awards, e.g., IEEE Outstanding Career Award, was listed among the AI's 10 to Watch, and was featured in Forbes as one of the 5 People Building Our AI Future. He is an IEEE Fellow, Associate Editor of many top-tier AI journals, e.g., INFFUS and IEEE TAFFC, and is involved in various international conferences as program chair and SPC member.

Coordinators

Dr. Namita Mittal is an Associate Professor in Department of Computer Science and Engineering, MNIT Jaipur. She has more than 25 years of experience in research and teaching. She is recipient of Career Award for Young Teachers (CAYT) by AICTE. Her current research areas are Data Science, Information Retrieval, Data mining and NLP. She is Senior Member of IEEE, Member of ACM, CCICI and SCRS. She is also faculty advisor of Women in Engineering (WIE) of IEEE and ACM and Executive Committee member of IEEE Rajasthan sub section. She has published two books and several SCI indexed international journal papers and conference papers.

Dr. Basant Agarwal is an Assistant Professor at the Indian Institute of Information Technology Kota (IIIT-Kota), India, which is an Institute of National Importance. He holds a Ph.D. and M.Tech. from Department of Computer Science and Engineering, Malaviya National Institute of Technology Jaipur, India. He has more than 9 years of experience in research and teaching. He has worked as a Postdoc Research Fellow at the Norwegian University of Science and Technology (NTNU), Norway, under the prestigious ERCIM (European Research Consortium for Informatics and Mathematics) fellowship in 2016. He has also worked as a Research Scientist at National University of Singapore (NUS). His research interest are in AI, Text mining, Natural Language Processing, Machine learning, Deep learning, Intelligent Systems, Expert Systems and related areas.

Registration	Number of participants for the course will be limited to approx. fifty. Registration deadline April 25, 2022 (registration on first come first served basis). Visit http://www.gian.iitkgp.ac.in/ for registration.
You Should Attend If you are…	• Executives, engineers and researchers from service and government organizations including R&D institutions. • Students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.
Important Dates	Registration Deadline: April 25, 2022 Date of Confirmation: April 25, 2022 Course Dates: May 9-13, 2022

Fees	The participation fees for taking the course is as follows:		
		Online	Offline
	Participants from abroad	US $220 [incl 18% GST]	US $295 [incl 18% GST]
	Industry / Research Organizations	Rs 4000/- + 18% GST = Rs 4720/-	Rs 6000/- + 18% GST = Rs 7080/-
	Faculty from Academic Institutions	Rs 2000/- + 18% GST = 2360/-	Rs 5000/- + 18% GST = Rs 5900/-
	Research Scholars/Postgraduate students*	Rs 1000/- + 18% GST = 1180/-	Rs 4000/- + 18% GST = Rs 4720/-

The GIAN course will be conducted in hybrid mode (offline and online). Number of seats may be limited prevailing covid situation.

MNIT Students do not have to pay.

The registration for those who will join in offline mode includes all instructional materials, computer use for tutorials and assignments, free internet facility, and lunch+tea on all days. The participants will be provided with accommodation on payment basis based on availability as per Institutes rules. GST needs to be paid.

Payment details: Online or DD

(i) DD: in name of Registrar (Sponsored Research) MNIT Jaipur.

(ii) Online payment: Account Name- Registrar (Sponsored Research) MNIT Jaipur, Account No.: 676801700388, IFSC-ICIC0006768, Bank Name: ICICI Bank Ltd., Branch: MNIT Jaipur, MICR:302229031.

Contact for any queries	Dr. Namita Mittal, Coordinator, nmittal.cse@mnit.ac.in Dr. Basant Agarwal, Coordinator, basant.cse@iiitkota.ac.in