

AI RESEARCH AND APPLICATIONS IN THE ERA OF BIG DATA AND “LARGE” MODELS

In this talk, Professor Dejing Dou will first briefly introduce several milestones in the history of artificial intelligence. He will then discuss the new developments in artificial intelligence, particularly in deep learning and large language models, and their applications in big data, combining his research and applications at the University of Oregon, Baidu Research, and Boston Consulting Group. The main topics include: 1) cross-disciplinary research in semantic technology and deep learning in health informatics, 2) applications of spatio-temporal big data mining in smart cities and clean energy, 3) the use of federated learning in trustworthy AI and large language models, 4) interpretability in deep learning and research in bio-computing, and 5) the implementation of generative AI and large models in business scenarios.

 **17 January 2024 (Wednesday)**  **SEK210, 2/F, Simon & Eleanor Kwok Building**
 **10:00am – 11:30am**  **English**

SPEAKER:
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Dejing Dou is the Chief Data Scientist at BCG in Greater China, and an adjunct Professor at Tsinghua University. He was the Head of Big Data Lab (BDL) and Business Intelligence Lab (BIL) at Baidu Research. He was also a tenured full Professor at the Computer and Information Science Department at the University of Oregon and led the Advanced Integration and Mining (AIM) Lab. He had been the Director of the NSF IUCRC Center for Big Learning (CBL) from 2018 to 2020. He was a visiting associate Professor at Stanford Center for Biomedical Informatics Research during 2012-2013. Prof. Dou received his bachelor degree from Tsinghua University, China in 1996 and his Ph.D. degree from Yale University in 2004. His research areas include artificial intelligence, data mining, data integration, NLP, and health informatics. He applied his research in applications from various domains including clean energy, EHR data analysis, drug design, finance, product differentiation, smart city, and social behavior & health. Dejing Dou has published more than 200 research papers, some of which appear in prestigious conferences and journals like AAI, IJCAI, ICML, NeurIPS, ICLR, KDD, ICDM, ACL, EMNLP, CVPR, ICCV, CIKM, ISWC, AIJ, JMLR, TKDE, TKDD, KAIS, JIIS, and Nature Sustainability with more than 8600 Google Scholar citations. His DEXA'15 paper received the best paper award. His KDD'07 paper was nominated for the best research paper award. His COLING'18 paper was Area Chair Favorites (excellent). He is on the Editorial Boards of Journal on Data Semantics, Journal of Intelligent Information Systems, and PLOS ONE. He is an Editor-in-Chief of AIMS Electronic Research Archive. He has been serving as program committee members for major international conferences and as program co-chairs for six of them. He has received over \$5 million PI research grants from the NSF and the NIH. Dejing Dou is a senior member of AAI, ACM, and IEEE.