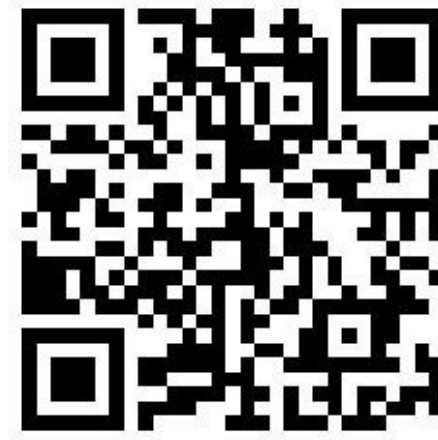


Big Data, Deep Learning, and Federated Learning Research at Baidu

Date: 17 September 2020 (Thursday)

Time: 4pm – 5pm

Seminar link: <https://cityu.zoom.us/j/96670604354>



ABSTRACT

Big data, Deep Learning, and huge computing are shaping up AI and are transforming our society. Big-data-driven decision making and automation are being utilized to solve significant challenges faced by our society in an unprecedented scope. At Big Data Lab (BDL) of Baidu Research, we are working on cutting-edge research to better harness big data. We have been leading an initiative on “Open and Inclusive AI”, aiming to promote equal access to advanced AI capabilities by all parties through significantly reducing the construction and management cost of AI models. We have developed and maintained Baidu AutoDL, a suite of software and algorithms to use deep learning to design and train deep learning models, which includes Neural Architecture Search, transfer learning, and interpretability of deep learning. We also have developed FedCube, a secure data sharing platform for federated learning and cloud-based cooperation and computing. It provides users with comprehensive cloud data and optimal scheduling of computing resources and achieves automated and scalable deployment of workflow. Seven universities and research institutes have used the FedCube platform to analyze the real-time and historical data collected from the Baidu Maps and Baidu search engines. Interesting scientific discoveries have been reported for analyzing the COVID-19 pandemic in China.



Professor Dejing DOU GUEST SPEAKER'S PROFILE

Professor Dejing DOU is a full Professor in the Computer and Information Science Department at the University of Oregon and leads the Advanced Integration and Mining (AIM) Lab since 2005. He is also the Director of the NSF IUCRC Center for Big Learning (CBL) since 2018. He 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. Dejing Dou has published more than 100 research papers, some of which appear in prestigious conferences and journals like AAAI, IJCAI, ICML, ICLR, KDD, ICDM, ACL, EMNLP, CIKM, ISWC, JIIS and JoDS, with more than 3000 Google Scholar citations. His DEXA'15 paper received the best paper award. His KDD'07 paper was nominated for the best research paper award. He is on the Editorial Boards of Journal on Data Semantics, Journal of Intelligent Information Systems, and PLOS ONE. He has been serving as program committee members for major international conferences and as program co-chairs for five of them. Dejing Dou has received over \$5 million PI research grants from the NSF and the NIH. He was a Visiting Associate Professor at Stanford Center for Biomedical Informatics Research during 2012-2013. He is currently on leave from the University of Oregon and serve the head of Big Data Lab (BDL) and Business Intelligence Lab (BIL) at Baidu Research.