南开大学机器人与信息自动化研究所 天津市智能机器人技术重点实验室

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报告题目：The First Step for AI-based Human-Like Language Understanding - Sentiment Analysis of Text

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Abstract:

With the advent of the Internet, more and more people prefer to post their feedback, reviews, and opinions through social media platforms, such as Facebook, Twitter, Chinese Weibo, and so on. Sentiment analysis of such data is becoming a fast and effective way of evaluating public opinion and sentiment for addressing practical problems, such as predicting consumer preferences or sensing public emotions towards some products, services or issues. In addition, the current AI systems and robots developed still cannot truly understand human language. Therefore, the motivation of this research is two folds: (i) To Realize Human Like Real-World Language Understanding of Text; and (ii) To Develop Human Like Brand New AI Technologies for Big Data Analysis. As the first step to realize the two goals, in this talk, the presenter will introduce sentiment analysis of text, which includes learning-based, non-learning based and hybrid methods. For learning-based methods, different enhancements, such as feature selection, negation dealing, and emoticon handling are studied to improve the performance of existing machine learning methods; for non-learning based methods or hybrid methods, a series of patentable technologies are proposed to address the limitations of the existing methods.

Biography:

Dr. Zhaoxia Wang is a data and AI scientist at the Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A\*STAR), Singapore. She received her MS from the College of Information Technical Science and PhD from Department of Automation and Intelligence Science, Nankai University, Tianjin, P. R. of China. After her PhD studies, she spent 2 years as postdoctoral researcher at Tianjin University. She was promoted to Associate Professor of Tianjin University of Technology in 2004. From Aug. 2005 to Dec. 2005, she was awarded and funded as a visiting scholar at the School of Computer Science and the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), University of Birmingham, UK. She worked for the National University of Singapore (NUS) from 2008 to 2011 before joining IHPC, A\*STAR. She has been awarded an Adjunct Professorship of Tianjin University since 2015. As an expert in AI, data analytics, and NLP (focused on fine-grained sentiment and emotion analysis), she has successfully led and delivered more than 10 research as well as industry projects as Principal Investigator (PI), co-PI and Technical Lead during her 10+ years of working experience in Singapore since 2008, and had successfully delivered 6 projects as PI or co-PI in her early career as an associate professor from 2004 to 2008 in China. She has just been awarded a new project: “AI Opinion-based Stock Market Trending Analysis” as the key technical person. She spearheaded the development of 5+ quality IPs as the first inventor and more than 10 companies have signed evaluation licenses or commercial licenses on her patents. She is currently the technical lead in the data analytics and AI research area. Her current research interests include data analytics, machine learning, text mining, natural language processing, fine-grained sentiment and emotion analysis, opinion-based stock marketing trending analysis, social media content mining and analysis, safety and risk analysis, AI & CI and their applications.