Neural Network Theory and Applications：Lecture 11
神经网络理论及应用：第11讲

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Lecture Eleven

- Invited Talk：Dr. Weinan Zhang
- Invited Talk: Dr. Li Nie
- Introduction to final project

Invited Talk: Deep RL

张伟楠

Weinan is now a tenure-track assistant professor in Department of Computer Science, Shanghai Jiao Tong University. His research interests include machine learning and big data mining, particularly, deep learning and (multi-agent) reinforcement learning architectures, mechanisms, training algorithms and their applications in real-world data mining scenarios including computational advertising, recommender systems, text mining, web search and knowledge graphs.

Weinan earned his Ph.D. from University College London in 2016 and B.Eng. from ACM Class of Shanghai Jiao Tong University in 2011. He was an intern at MediaGamma, Microsoft Research, Google and DERI.

Invited Talk: Transfer Learning

牛 力

Li Niu is currently an associate professor appointed at Department of Computer Science and Technology in Shanghai Jiao Tong University in China. I specialize in computer vision, machine learning, and deep learning. Specifically, I focus on weakly supervised learning and transfer learning

Prior to now, I was a postdoctoral associate at Rice University in Houston, TX, USA. Before that, I obtained my Ph.D degree from Nanyang Technological University (NTU) in Singapore and bachelor degree majoring in computer science from University of Science and Technology of China (USTC) in China.

Course Mechanics

- Programming exercises : each student will do 5 of these, including one of own devising (in consultation with instructor).
- Grading: **40%** programming exercises; **40%** final project; **20%** quiz and class participation.
- Deadline of final Project: **June 30, 2019**

Final Project

1. The content of this final project is open.
2. You can choose any topic related to both your lab research and this course.
3. Deadline of final Project: **June 30, 2019**

Final Project Requirements

1. You must solve a problem related to neural networks and machine learning (e.g. pattern classification, clustering, prediction, etc.).
2. Some state-of-the-art neural network and deep learning techniques are incorporated in your solution, such as Auto-encorder, CNN, LSTM, GAN, Transfer learning etc.
3. The technical report of this project is required.

Final Project Requirements (cont.)

4. It must be organized in a comprehensive structure with detail description about the motivation, method, experimental results, discussion and conclusion. The length of this report should be 10pt, two column, 8 pages, either Chinese or English.

5. You can use some packages downloaded from the Internet. But you'd better briefly introduce that package in your report.

6. You should submit both the report and source code .

Have a Nice Final Project !