# Machine Learning Course Information

#### Rui Xia

School of Computer Science & Engineering Nanjing University of Science & Technology <a href="mailto:rxia@njust.edu.cn">rxia@njust.edu.cn</a>

http://www.nustm.cn/member/rxia

### **Contact**

Lecturer (Rui Xia)

– Email: <u>rxia@njust.edu.cn</u>

— Homepage: <a href="http://www.nustm.cn/member/rxia">http://www.nustm.cn/member/rxia</a>

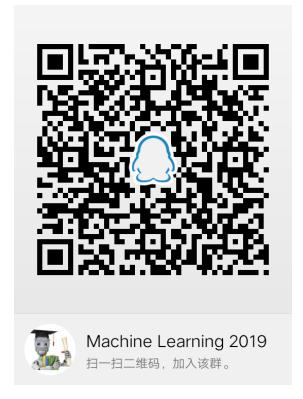
- Address: Room 3030, School of CS

 Course Webpage <a href="http://www.nustm.cn/member/rxia/ml/">http://www.nustm.cn/member/rxia/ml/</a>

Teaching Assistant (Kaizhou Xuan)

- Phone: 18751897908

QQ Group: 714295416



# **Syllabus**

- An Introduction to Machine Learning
- Linear Regression
- Logistic Regression and Softmax Regression
- Perceptron Algorithm
- Aritificial Neural Network and Back Propagation
- Generative Model vs. Discriminative Model
- Naïve Bayes Model
- Application: Text Classification as an Example

## **Course Assessment**

- In-class behavior (10%)
  - Attendance
  - Questions/Answers
  - Some assignments to be finished in class
- Projects and oral presentations (40%)
  - 5 students for one group, one project for each group
  - For each group, 15 minutes slides/presentation, containing
    - The review of the machine learning model you chose;
    - The implementation of the model;
    - The report of the experimental results.
  - The contribution of each group member should be specified.
- Final examination (50%)
  - Open-book examination in English

## References

#### English Materials

- Prof. Andrew Ng's <u>machine learning course at coursera.org</u>; (★, number of stars means the level of reading difficulty)
- Prof. Andrew Ng's <u>machine learning class at Stanford</u>
  <u>University [materials]</u> [video]; (★★★)
- Christopher Bishop. Pattern Recognition and Machine Learning, 2007.
  (★★★★★)
- T. Hastie, R. Tibshirani, and J. Friedman. The Elements of Statistical Learning, 2001. (★★★★★)

#### Chinese Materials

- 周志华. 机器学习, 清华大学出版社, 2016. (★★)
- 李航. 统计学习方法, 清华大学出版社(第二版), 2019. (★★★)
- 宗成庆, 夏睿, 张家俊. 文本数据挖掘, 清华大学出版社, 2019. (★★)



# **Any Questions?**