

# Machine Learning Course Information

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Machine Learning 2019  
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# Syllabus

- An Introduction to Machine Learning
- Linear Regression
- Logistic Regression and Softmax Regression
- Perceptron Algorithm
- Artificial 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 [machine learning course at coursera.org](https://www.coursera.org/learn/machine-learning); (★, number of stars means the level of reading difficulty)
- Prof. Andrew Ng's [machine learning class at Stanford University](https://www.youtube.com/watch?v=6nTnqA83G0I) [[materials](#)] [[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?**