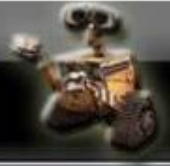


Artificial Intelligence

Course Information

Donghui Wang
AI Institute@ZJU
Spring 2015

Outlines

- Teaching Staff and Contact Info
- Course Description
- Prerequisites
- Course materials and references
- Homework and grading

Teaching Staff and Contact Info

- Course No: (2014-2015-2)-21190770-0004286-1
- Classroom: Room 204, CaoGuangBiao West-Wing
- Date and Time:
  - Week 1~8
  - Monday 9:50pm~11:25pm,
  - Wednesday 8:00pm~9:35pm
  - Final Exam: to be notified

Teaching Staff and Contact Info

- Teacher:
  - Dr. Donghui Wang, dhwang@zju.edu.cn
- Teaching Assistants:
  - Yanan Li, Phd. Student, ynli@zju.edu.cn
  - Yuetan Lin, Phd. Student, linyuetan@zju.edu.cn

- Office hour:
  - Wednesday, 14:00-17:00
  - Room 608, CaoGuangBiao Building

Course Description

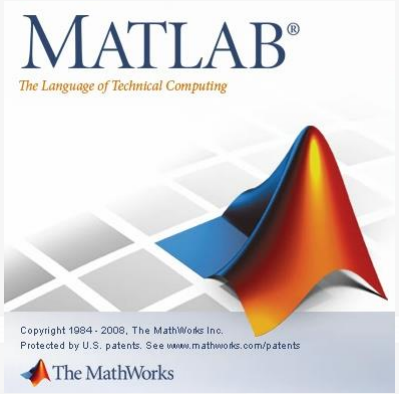
- Broad and brief introduction to artificial intelligence, but focus on machine learning and statistical pattern recognition.

- Topic include:
  - AI basic concepts: Turing test, history of AI, …
  - Related math: Linear Algebra/Matrix computation, probability distributions
  - Supervised learning: regression, classification, SVM,…
  - Unsupervised learning: clustering, dimensionality reduction, kernel methods,…
  - Knowledge Representation
  - Decision Trees, Neural Networks
  - Discuss recent applications of ML to robots, data mining, visual recognition, cross-media retrieval and knowledge center…

Prerequisites

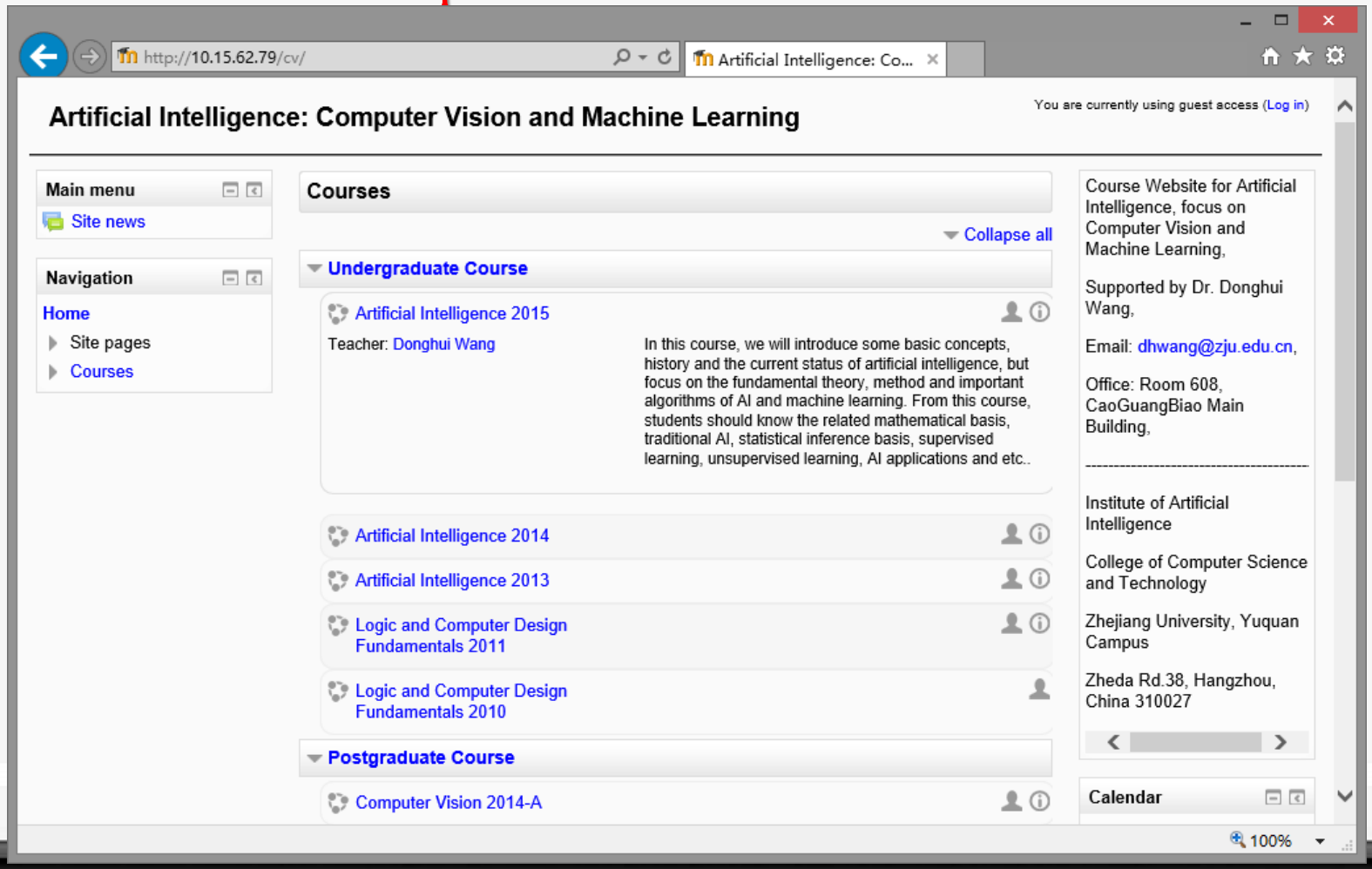
- Students are expected to have the following background:
  - Basic programming skills;
  - Familiarity with the basic linear algebra;
  - Familiarity with the basic probability theory.

- The following knowledge is recommended but not necessary:
  - To use Matlab tools
  - To use Optimization tools
  - Basic concepts of image formation and transformation



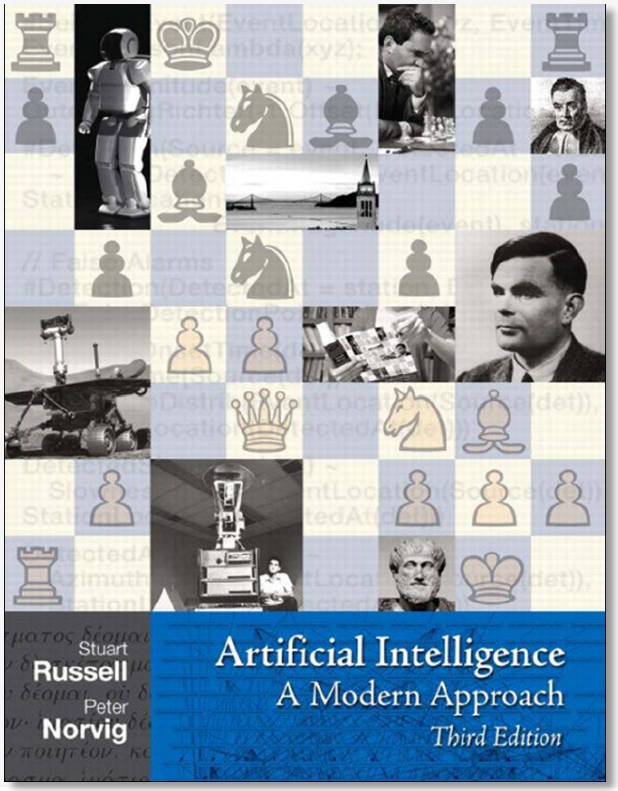
Course materials and references

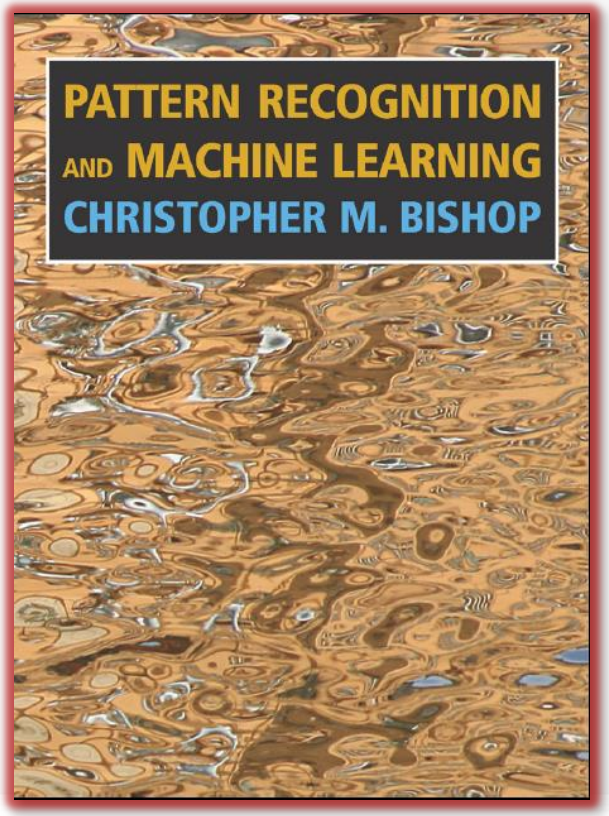
- Course Website: http://10.15.62.79/cv

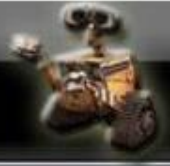


Course materials and references

- Recommended reference books:







Course materials and references

- Referenced online resources:
  - http://cs229.stanford.edu/info.html, by Prof. Andrew Ng
- Video lectures:
  - http://see.stanford.edu/see/courseinfo.aspx?coll=348ca38a-3a6d-4052-937d-cb017338d7b1
- Other recommended online courses:
  - AI, ML, DA: http://www.coursera.org/

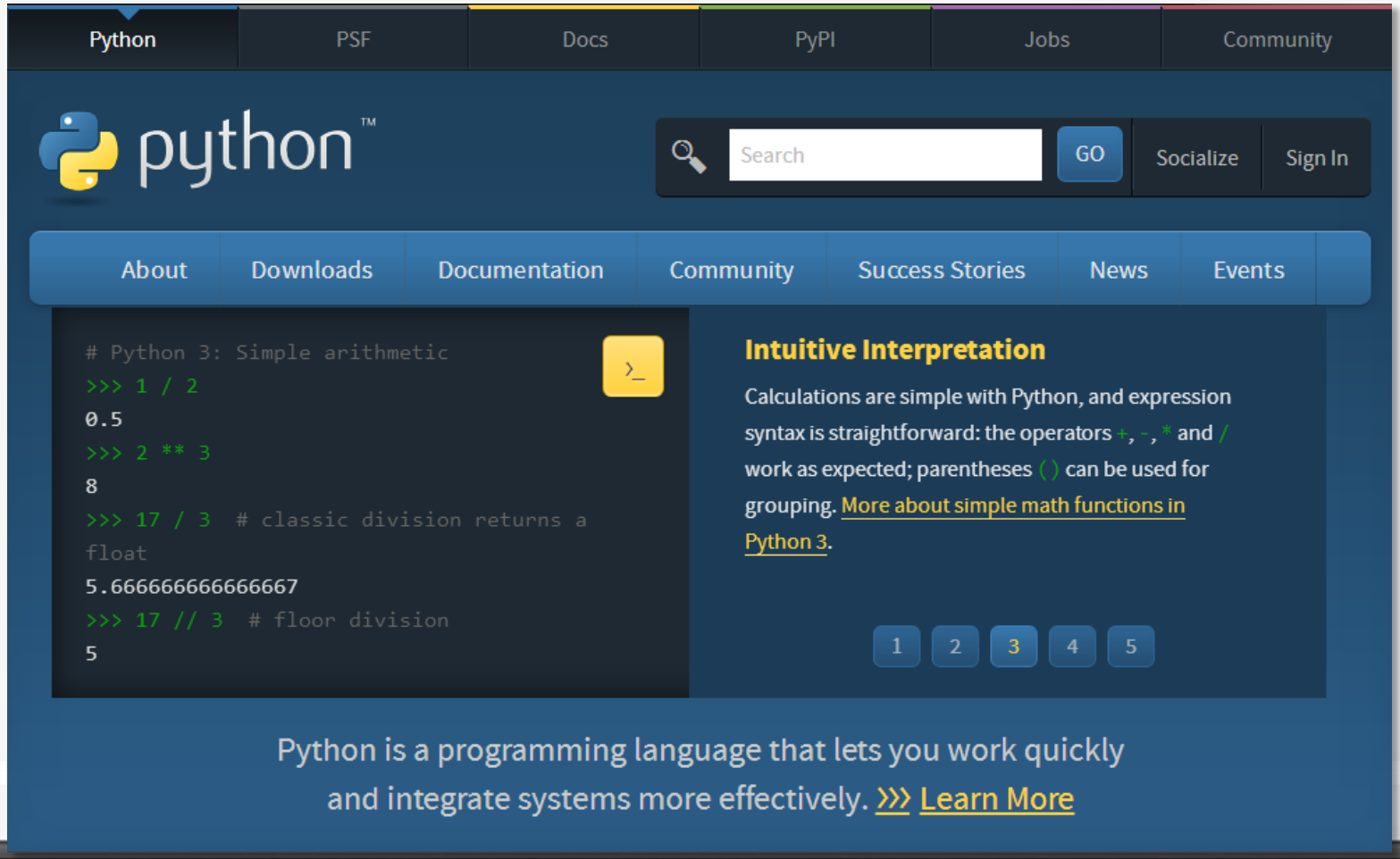
Course materials and references

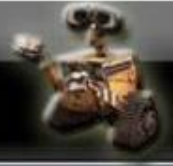
- Matlab
  - Interactive MATLAB Tutorial
  - Getting Started with MATLAB and MATLAB Examples
  - http://www.mathworks.cn/academia/student_center/tutorials/launchpad.html

- ML dataset:
  - http://archive.ics.uci.edu/ml/datasets.html
  - 235 Data Sets for:
    - Classification
    - Regression
    - Clustering……

Course materials and references

- phthon: https://www.python.org/





Course materials and references

- Journals:
  - AI: Artificial Intelligence
  - TPAMI: IEEE Trans on Pattern Analysis and Machine Intelligence
  - JMLR: Journal of Machine Learning Research
  - IJCV: International Journal of Computer Vision
- Conferences:
  - IJCAI: International Joint Conference on Artificial Intelligence
  - ICCV: International Conference on Computer Vision
  - ICML: International Conference on Machine Learning
  - CVPR: IEEE Conference on Computer Vision and Pattern Recognition
  - AAAI: AAAI Conference on Artificial Intelligence

Homework and grading

- **Homework:**
  - Four homeworks and 10 points each;
  - The homeworks will contain written questions and questions that require some Matlab programming;
  - Submit your homework (code) in time to get base score (7 points), other score (3 points) depends on your solution;
  - Homework turned in late will be penalized 1 point per late day.

- **Course grades:**
  - 40% on homeworks
  - 10% on attendance
  - 50% on final exam

Questions?