List of related AI Classes

CS229 covered a broad swath of topics in machine learning, compressed into a single quarter. Machine learning is a hugely inter-disciplinary topic, and there are many other sub-communities of AI working on related topics, or working on applying machine learning to different problems.

Stanford has one of the best and broadest sets of AI courses of pretty much any university. It offers a wide range of classes, covering most of the scope of AI issues. Here are some some classes in which you can learn more about topics related to CS229:

AI Overview

- CS221 (Aut): Artificial Intelligence: Principles and Techniques. Broad overview of AI and applications, including robotics, vision, NLP, search, Bayesian networks, and learning. Taught by Professor Andrew Ng.

Robotics

- CS223A (Win): Robotics from the perspective of building the robot and controlling it; focus on manipulation. Taught by Professor Oussama Khatib (who builds the big robots in the Robotics Lab).

- CS225A (Spr): A lab course from the same perspective, taught by Professor Khatib.

- CS225B (Aut): A lab course where you get to play around with making mobile robots navigate in the real world. Taught by Dr. Kurt Konolige (SRI).

- CS277 (Spr): Experimental Haptics. Teaches haptics programming and touch feedback in virtual reality. Taught by Professor Ken Salisbury, who works on robot design, haptic devices/teleoperation, robotic surgery, and more.

- CS326A (Latombe): Motion planning. An algorithmic robot motion planning course, by Professor Jean-Claude Latombe, who (literally) wrote the book on the topic.

Knowledge Representation & Reasoning

- CS222 (Win): Logical knowledge representation and reasoning. Taught by Professor Yoav Shoham and Professor Johan van Benthem.

- CS227 (Spr): Algorithmic methods such as search, CSP, planning. Taught by Dr. Yorke-Smith (SRI).

Probabilistic Methods

- CS228 (Win): Probabilistic models in AI. Bayesian networks, hidden Markov models, and planning under uncertainty. Taught by Professor Daphne Koller, who works on computational biology, Bayes nets, learning, computational game theory, and more.

Perception & Understanding

- CS223B (Win): Introduction to computer vision. Algorithms for processing and interpreting image or camera information. Taught by Professor Sebastian Thrun, who led the DARPA Grand Challenge/DARPA Urban Challenge teams, or Professor Jana Kosecka, who works on vision and robotics.

- CS224S (Win): Speech recognition and synthesis. Algorithms for large vocabulary continuous speech recognition, text-to-speech, conversational dialogue agents. Taught by Professor Dan Jurafsky, who co-authored one of the two most-used textbooks on NLP.

- CS224N (Spr): Natural language processing, including parsing, part of speech tagging, information extraction from text, and more. Taught by Professor Chris Manning, who co-authored the other of the two most-used textbooks on NLP.

- CS224U (Win): Natural language understanding, including computational semantics and pragmatics, with application to question answering, summarization, and inference. Taught by Professors Dan Jurafsky and Chris Manning.

Multi-agent systems

- CS224M (Win): Multi-agent systems, including game theoretic foundations, designing systems that induce agents to coordinate, and multi-agent learning. Taught by Professor Yoav Shoham, who works on economic models of multi-agent interactions.

- CS227B (Spr): General game playing. Reasoning and learning methods for playing any of a broad class of games. Taught by Professor Michael Genesereth, who works on computational logic, enterprise management and e-commerce.

Convex Optimization

- EE364A (Win): Convex Optimization. Convexity, duality, convex programs, interior point methods, algorithms. Taught by Professor Stephen Boyd, who works on optimization and its application to engineering problems.

AI Project courses

- CS294B/CS294W (Win): STAIR (STanford AI Robot) project. Project course with no lectures. By drawing from machine learning and all other areas of AI, we'll work on the challenge problem of building a general-purpose robot that can carry out home and office chores, such as tidying up a room, fetching items, and preparing meals. Taught by Professor Andrew Ng.