CS401

Machine Learning & Neural Networks

HW3 - Unsupervised Learning

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1. Group list

I used K-Means for GOAL, DATA, METHODS, RESULTS, ISSUES, COMMENTS respectively and obtained their Topic words. Then I generalize their approximate contents by the Topic words and use them as the names of the classes.

* 1. Using Goal
     1. Creating machine learning systems that save time

Topic Words: ai, using, use, learning, time, machine, create, system, goal

* + 1. Predicting and improving health

Topic Words: predict, improve, early, eye, performance, reduce, alzheimer, mars, model, find

* + 1. Image Processing

Topic Words: go, images, beat, create, play, could, human, data, new, languages

* 1. Using DATA
     1. Facebook

Topic Words: past, facebook, us, patients, photos, collected, data, study, project, research

* + 1. Game

Topic Words: database, game, data, images, used, zinc, taken, face, eye

* + 1. Various

Topic Words: various, data, images, training, dataset, input, machine, learning, set, go

* 1. Using METHODS
     1. Neural networks

Topic Words: models, artificial, convolutional, neural, facial, network, used, regression, recognition

* + 1. Unsupervised learning

Topic Words: unsupervised, deep, natural, language, processing, learning, classification, mentioned, data, network

* + 1. Supervised learning

Topic Words: supervised, learning, machine, network, reinforcement, used, neural, algorithm, different, image

* 1. Using RESULTS
     1. Improved medical outcomes

Topic Words: percent, language, improvement, patients, images, best, less, algorithm, user, model

* + 1. A system with an accuracy rate comparable to that of humans

Topic Words: accuracy, system, human, people, go, tests, capable, rate, identified, new

* + 1. Get better results

Topic Words: results, better, able, machine, however, first, within, ai, new, predict

* 1. Using ISSUES
     1. Team and ethical issues

Topic Words: issues, could, time, team, ethical, issue, system, images, training, problem

* + 1. Model bias exists

Topic Words: model, good, result, large, possible, exists, bias, false, dataset, able

* + 1. Public issues related to person

Topic Words: issues, n, person, use, problems, used, public, question, testing, model

* 1. Using COMMENTS
     1. Machine learning is useful and cool

Topic Words: like, useful, cool, interesting, learning, find, new, specific, technology

* + 1. Future Systems

Topic Words: future, system, projects, model, could, field, google, quite, images, data

* + 1. Humans and machine learning are inextricably linked

Topic Words: n, learning, machine, people, humans, study, ai, many, seems, always

1. Something I found in the data
   1. Students prefer to learn about supervised methods.
   2. Students prefer to learn how to use machine learning to create systems that can save time.
   3. Students think that machine learning has many ethical and team issues.
   4. Students learned more about the application of machine learning in healthcare
   5. Neural networks methods are cool and useful
   6. Supervised learning and humans are inextricably linked