Titles of Projects from Previous Versions of the Course

If you would like more information on any of these, I will do my best to help you. The actual project reports are available only for the Fall 2004 course and you are welcome to arrange to look at these in my office. You are also welcome to ask me about some of the earlier titles; for many of them I can still recall additional details of what the project entailed.

From the Fall 2004 semester:

Walking stick
Learning web browsing patterns
Q-learning in a multi-opponent economic domain
User identification based on keystroke latencies
StitchER (Stitch employees to Rainbow)
SearchBot
Predicting immunization from demographics and reported quality of life
Neural network sentence classification
Traffic light control systems using reinforcement learning and neural nets
Isolated word recognizer using hidden Markov models
Artificial neural networks for the evaluation of endstate GO positions
Experimental analysis of generalized itemset algorithms
Artificial neural networks using hidden ellipsoids
Maximizing the winning percentage of a major league baseball team
Information diffusion learning for the kerf project
Using back-propagation to determine dismounted soldier movement rate
Linear and nonlinear data analysis using multi-layer neural networks

From the Spring 2003 quarter:

Parallel training in multi-layer perceptrons
Two lazy learning methods to classify the party affiliation of the 107th Senate
Predicting caravan insurance policy ownership based on data from the CoIL Challenge 2000
Artificial neural networks vs. principal component analysis: a case study for face recognition
Evolution of classification rules for cellular automata using genetic algorithms
Genetically evolved, pattern-based heuristic for the Connect-4 game
Text classification using 3 different learning algorithms
Machine learning methods for authorship attribution
Identifying person based on keystroke latencies
An EM-based approach to linkage disequilibrium analyses of experimental cross data
Evaluation of machine learning algorithms
Optimal process scheduling with reinforcement learning

Training a face classifier on multiple targets

A comparison of two feature subset selection methods applied to the k-means algorithm

Word-level rate of speech modeling

Diagram classifications

Active learning with multi class support vector machines for email classification

How to determine the number of clusters for k-means clustering

Initial study of using SVMlight to analyze THEMATICS data

Recurrent reinforcement learning in financial market trading

Classification of breast cancer using artificial neural network

Randomness measurement with ANN

Face detection in gray images using support vector machines

From the Fall 1997 quarter:

Deep sky object recognition and classification

Rule extraction from neural nets using genetic algorithms

Optimizing the parameters of countinuous density hidden Markov models for speech recognition using genetic algorithms

Yet another pole balancer

Regular language grammar induction using genetic algorithms

Adaptive pattern classification using a hybrid approach

Learning to navigate using Dyna-Q architecture

Automatic test pattern generation using genetic algorithms

Parallel implementation of a genetic algorithm to solve the traveling salesman problem

An automatic circuit board layout program using genetic algorithm

Online handwriting recognition using neural networks and genetic algorithm

Sun, rain, and machine learning – a comparison of ML approaches to the problem of weather forecasting