AI Notebook

This notebook is for you to organize and summarize what you have learned about AI. It is to have an entry for each topic that we cover. If there are two readings for one topic, you should write a single paragraph on each reading. If one reading, two paragraphs (one that summarizes the paper and a second that discusses your thoughts or opinions about the paper) on it. If no paper was assigned, you should write a summary paragraph about the topic. If an optional paper was assigned, you can either write two paragraphs about the paper or one summary paragraph on the topic. These are to be done individually and submitted via email by the last day of finals.

COM316 Topics List

Simple Search, Heuristic Search, Real-Time Search, Game Playing (Mini-Max), Propositional Logic, First-Order Logic, Production Systems, Planning, Semantic Networks, Frames, Thematic-Role Frames, Scripts, Current-Best Learning, Version Space Learning, Case-Based Reasoning, Feed-Forward Neural Networks, Perceptron Learning, Genetic Algorithms, ChatGPT, and Thoughts on AI

COM316 Readings

Blind Methods from Winston book (one paragraph is fine)
Uninformed Search Strategies from Russel and Norvig book (one paragraph is fine)
A Formal Basis for the Heuristic Determination of Minimum Cost Paths by Hart, Nilsson, and Raphael
Genetic Algorithms for the Development of Real-Time Multi-Heuristic Search Strategies by Shing and Parker
A Chess Playing Program for the IBM 7090 Computer by Alan Kotok
Propositional Logic from Russel and Norvig book
Rules and Rule Chaining from Winston book
Rule-Based Reaction Systems (the remainder of Chapter 7 from Winston book)
Semantic Networks from Russel and Norvig book
STRIPS: A New Approach to the Application of Theorem Proving to Problem Solving by Richard E. Fikes and Nils J. NHsson (optional reading)
Learning Structural Descriptions from Examples by Patrick Winston
Frames and Inheritance from Winston book
Frames and Commonsense from Winston book
Learning by Managing Multiple Models from Winston book
Conceptual Dependency and its Descendants by Steven Lytinen
Scripts, Plans, and Knowledge by Roger Schank and Abelson
Case-Based Reasoning: Foundational Issues, Methodological Variations, and System Approaches by Aamodt and Plaza
Parallel Distributed Processes by McClelland, RumelHart, and Hinton -- Chapter One
Distributed Neural Network: Dynamic Learning via Backpropagation with Hardware Neurons using Arduino Chips
An Introduction to Genetic Algorithms by Melanie Mitchell – Chapter One
Using a Genetic Algorithm to Replicate Allopatric Speciation
What Is ChatGPT Doing ... and Why Does It Work?