List of Projects from Core CS Classes

Computer Vision - Seam Carving Algorithm - C++ EECS 280
- Dynamic memory, structs, C-style object oriented programming.

Euchre - C++ EECS 280
- Built simulator for the card game Euchre.
- Abstract data types and polymorphism.

Web and Linked List Implementation - C++ EECS 280
- Built a small web server for an office hours help queue website.
- REST API, reading and writing JSON.
- Implemented a doubly linked list.

Machine Learning and BST - C++ EECS 280
- Built a program to classify Piazza posts based on subject material.
- Implemented using a binary search tree.
- Implemented a Templated Binary Search Tree.

Puzzle Solver - C++ EECS 281
- Implemented program to efficiently solve a puzzle made of characters.
- Implemented a backtracking algorithm to find solution.
- Optimized to use small amounts of memory.

Stock Market and Priority Queue - C++ EECS 281
- Implemented program to handle buy/sell requests from a virtual stock market using priority queues.
- Implemented a sorted array priority queue.
- Implemented a binary heap priority queue.
- Implemented a pairing heap based off of papers by Sahni and Fredman.

SillyQL - C++ EECS 281
- Implemented a relational data base with a simple command line interface.
- Built using hash tables.
- Optimized for speed.

Drone Delivery - C++ EECS 281
- Implemented a program to effectively plan routes for delivery drones to fly based on delivery locations.
- MST and TSP.
- Branch and Bound algorithm.