

Coursework

Software Engineering

Version control, CI/CD and pipelining, Agile software development philosophy, DevOps and project management techniques / philosophies.

Computer Networks

Explored Socket API in C; Data Link, Network, Transport, and Application layers of the OSI model; TCP / IP

Databases

Covered SQL, relational database design with ER and UML diagramming, Oracle, Big Data principles and using Hadoop / Pig.

Compiler Design

Explored Flex and Bison by creating a compiler for a simple programming language

Systems Architecture

Learned the architecture of a processor, and computers, from the ground up. I learned more in this class than any other I've taken; helped me understand how software runs on physical hardware.

Web Programming

Covered basic HTML and CSS, React, Node servers with Express, and integrating a MySQL server with Node.

Artificial Intelligence

Introductory AI course. Broad overview of Machine Learning, best-first search algorithms, and more

Algorithms and Data Structures

First learned basic C++ programming, then data structures: implemented templated Vector, Linked List, and Doubly Linked List classes. Explored sorting algorithms including Insertion Sort, Merge Sort, Quicksort, and Heap Sort and their runtimes. Consequently, learned asymptotic notation and the performance of the aforementioned algorithms. Finally, learned search algorithms, including Dijkstra's and Prim's algorithms, and Breadth First and Depth First searches.