

Project Ideas

Sorting Algorithms:

Implement and compare different sorting algorithms such as Bubble Sort, Merge Sort, and Quick Sort on different types of data sets.

Pathfinding Algorithms:

Implement and compare different pathfinding algorithms such as Breadth-First Search (BFS), Depth-First Search (DFS), and Dijkstra's algorithm for finding the shortest path between two points in a graph.

Image Processing Algorithms:

Implement and compare different image processing algorithms such as Edge Detection, Histogram Equalization, and Image Filtering using different techniques.

Data Compression Algorithms:

Implement and compare different data compression algorithms such as Huffman Coding, Lempel-Ziv-Welch (LZW) Algorithm, and Arithmetic Coding.

Cryptography Algorithms:

Implement and compare different encryption algorithms such as Caesar Cipher, Vigenère Cipher, and RSA Algorithm for secure communication.

Machine Learning Algorithms:

Implement and compare different machine learning algorithms such as Linear Regression, K-Nearest Neighbor (KNN), and Random Forest for classification and regression tasks.

Natural Language Processing Algorithms:

Implement and compare different natural language processing algorithms such as Sentiment Analysis, Named Entity Recognition (NER), and Part-of-Speech (POS) tagging.