Hamza A. Khan

hk84164@gmail.com / 209-740-5634 / https://github.com/HKcode22 / www.linkedin.com/in/hamza-khan-ds

EDUCATION

San Jose State University | San Jose, CA | *Bachelor of Science, Data Science (BS)*   **Expected May 2025**
Relevant Coursework: Data Structures and Algorithms, Machine Learning, Processing Big Data, Object Oriented Programming, Computer Architecture/Assembly Language, Calculus, Linear Algebra, Physics, Probability and Statistics

TECHNICAL SKILLS

Languages: Python, C++, Java, Assembly, R
Developer Tools: Google Colab Notebook, Jupyter Notebook, Intellij IDEA, Anaconda, Visual Studio, Eclipse, R Studios
Technologies/Frameworks: Pandas, Matplotlib, Numpy, Seaborn, Tensorflow, Scikit-Learn, Git, Linux

PROJECTS/Experience/GitHub

Machine Learning Project: Diabetes Prediction | Developed machine learning models to predict diabetes using a dataset from kaggle. Utilized logistic regression and decision tree classifiers to predict whether a patient has diabetes based on diagnostic measurements. Performed data preprocessing, handling missing values and feature engineering. Split the dataset into training and testing sets for model evaluation. Trained models and evaluated their performance using accuracy scores and confusion matrices. Visualized the results to interpret model performance and decision boundaries using libraries like Matplotlib, Pandas, and Seaborn.

OOP projects | Created many Object Oriented Programming projects in Java using IntelliJ IDEA and worked with teams. Including Cellular Automata customization of the mvc framework. Echo, which is a simple network application to send back received input, reinforcing understanding of network programming and protocols. SmartBox, implemented serialization and deserialization for container objects, enabling efficient storage and transmission of data structures. Simstation, developed simulation software with guidance and solutions provided to understand complex system behaviors and interactions.

AP Projects | Created a hangman game using Python. Utilized Replit for coding and debugging. Implemented game logic, basic graphics, and user interface. Also created a encoder-decoder project using Python and Visual Studios. The encoder-decoder program was used to encode and decode messages.

IMDB Top Movies Analyzing Data | Developed a data analyzing project using python and linux. Analyzed a data set of the top 1000 IMDB movies to gain insights into genre distributions and box office performance. Visualized data using Matplotlib and Seaborn. Used linux commands to extract important information from the data. Enhanced skills in data analysis, statistical analysis, and data visualization.

Text Processor | Developed a text processor program to improve file information accessibility using C++. Implemented core functionalities including spell check, finding unique words, and find/replace. The project enhanced skills in file processing, data manipulation, software development, data structures and algorithms.

Pokemon Character's Data Processing/Analyzing | Developed a Java application to read and process character data from a CSV file. Parsed data lines to extract character attributes. Implemented robust error handling to manage data conversion errors and different data formats. Created methods to efficiently retrieve and display processed data. Enhanced skills in Java programming, data parsing, and error handling.

Professional Skills

LeetCode
- I have dedicated significant time to solving coding challenges on LeetCode, focusing on improving my algorithmic thinking and problem-solving skills. By working on a wide variety of problems, I have strengthened my understanding of key concepts in computer science and prepared for technical interviews.
- Solved problems on LeetCode, covering essential topics like Arrays, Strings, Linked lists, Trees, Graphs, Dynamic Programming, sorting/searching algorithms, Queues, Stacks, Heaps, Hashmaps, Minimum Spanning Tree (MST) and Shortest Path problems, including Prim's, Kruskal's, and Dijkstra's algorithms. As well optimizing algorithms and improving on Time and Space Complexities.

Team Collaboration/Communication
- Experienced in working collaboratively in team environments, using tools like GitHub, Zoom, Discord, and other tools to communicate with team members. Strong written and verbal communication skills, capable of explaining technical concepts to non-technical stakeholders.

Time Management/Quick Learner
- Demonstrated effective time management and organizational skills, capable of managing multiple projects and deadlines. Consistently met deadlines and delivered high-quality work. Completed multiple online, hybrid, and in-person courses while maintaining a high GPA in pursuit of my BS degree in Data Science. Successfully undertook major-relevant courses across Fall, Spring, and Summer semesters.