MALLIKA DASGUPTA

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Computer Science Major at University of California San Diego(2023-2027)

EDUCATION

UNIVERSITY OF CALIFORNIA SAN DIEGO   **2023-2027**

Computer Science Major (3.886 GPA)

LANGUAGES

Java, Python, HTML, CSS, Javascript, SQL, C, C++

EXPERIENCE

- **Software Engineering/ML Intern at Nucsoft Ltd**   **July-September 2024**

  -**Developed** a Credit Appraisal System utilizing XGBoost, Random Forest, and Linear Regression models for data-driven loan underwriting, with a modular Python (Flask) backend supporting real-time model retraining and predictions.

  -**Designed** a React.js frontend integrated with REST APIs via Axios for model selection, evaluation, and loan approval, improving underwriting efficiency and decision accuracy across loan products.

  -**Implemented** advanced clustering algorithms for a vector-based property deduplication system, optimizing asset verification by identifying duplicates based on customizable rules for name, location, and area.

  -**Engineered** API workflows in Node.js and Python, enabling real-time deduplication, reducing data redundancy, and enhancing the accuracy of property verification across large datasets.

- **Web Development Intern at Xpertifi Skills Tech**   **July-September 2024**

  -**Developed** a range of interactive financial calculators using React.js, including Recurring Deposit, SIP, Simple Interest, EMI, and Compound Interest calculators, handling complex financial computations and dynamic user input.

  -**Implemented** real-time calculations for various financial metrics (e.g., future value, total interest, EMI amounts), integrating JavaScript math libraries to accurately compute compound interest, SIP returns, and EMI values based on principal, rate, and time inputs.

  -**Designed** a responsive UI using CSS3 and React hooks, ensuring cross-platform compatibility and a seamless user experience.

COMPUTER SCIENCE PROJECTS

- **Wearable Device Development | Hackathon (Hard Hacks)**   **April 2024**

  -Collaborated on designing DeSleepifier, a wearable device to keep users awake, integrating sensors and microcontrollers (Arduino).

  -Used soldering and embedded systems programming for hardware assembly, real-time task monitoring via sensors, and data transmission through Bluetooth.

  -Gained experience in sensor calibration and Android development, creating an app to interface with the device for task completion feedback.

- **Music Hit Prediction AI Algorithm**   **June 2022**

  - **Developed** a sophisticated algorithm using Python to predict a song's popularity using Spotify's extensive song database.

  - **Utilized** multiple classification techniques, including Logistic Regression, Support Vector Classifier (SVC), K-Nearest Neighbors, Gaussian Naive Bayes, Multi-Layer Perceptron (MLP) Classifier, and Recurrent Neural Networks (RNNs) with LSTM cells.

  - **Achieved** improved accuracy and identified RNNs with LSTM cells as the best-performing algorithm for predicting hit songs.

- **AI-Powered Tumor Detection System**   **June 2022**

  - **Developed** an AI model using Python for the precise detection of tumors from mammary biopsy samples.

  - **Employed** numerous classification algorithms, including Logistic Regression, Support Vector Classifier, Multiple Logistic Regression Classifier, and Decision Tree Classifier.

  - **Applied** data analysis to optimize model accuracy and minimize false positives.

CERTIFICATIONS

- Certified in Java programming, Python, and machine learning from Coursera, UC San Diego, Duke University, and the University of Michigan, covering Object-Oriented Programming, Data Structures, and key topics in Machine Learning and Data Science.