**SWIKRIT BHATTARAI**

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# Education

**University of Louisiana Monroe Expected Graduation Date: December 2025**

***Relevant Course Work:*** Introduction to Computer Programming, Intermediate Programming, Applied Data Structures, Analysis of

Algorithm, Object-Oriented Design and Programming, Database Management Systems, Computer Architecture, Operating Systems, Information Security Practice, Organization of Programming Languages

***Additional Courses:*** AWS Academy Cloud Foundation, CS50's Introduction to Artificial Intelligence with Python

# Skills

**Languages**: Python, JavaScript, TypeScript, Java, C++, C#, SQL, HTML5, CSS3, Bootstrap 5, SQL

**Tools & Frameworks:** React JS, Node JS, Next JS, Git, Spring Boot, Firebase, Postman, AWS, Figma, Numpy, Tensorflow

# Experiences & Leadership

**Technical Intern – Trinity International College(Kathmandu, Nepal) Duration:- 05/2022 – 08/2022**

* Authored detailed design documentation, testing notes, and experiment protocols to guide the development of a robust database management system.
* Streamlined the UI**,** enhancing product experience and reducing friction for users to retrieve data.
* Implemented changes using SQL, adhering to company’s code review process and industry-leading coding practices.
* Developed comprehensive API documentation to enable seamless interaction between the frontend and backend of the system. **Skills:** React JS (Typescript), AWS, SQL, Git, Program Management, Group Collaboration**,** Agile Methodology

**Teaching Assistant – University of Louisiana Monroe Duration:- 08/2024 – 12/2024**

* Introduced 38 freshman to Python programmingcomprising basic coding, debugging, and data structures.
* Helped professor by providing support during lab sessions, holding office hours, and counseling students.

**Skills**: Python, Public Speaking, One-on-one interaction

**IT HELP DESK – University of Louisiana Monroe**   **Duration:- 02/2023 – 05/2023**

* Provided technical support to students, faculty, and staff, resolving hardware and software issues efficiently and effectively.
* Collaborated with IT team members to improve service delivery and implement new technology solutions.
* Educated users on best practices for IT security, data protection, and effective use of university technology resources. **Skills:** Customer Support, Networking systems and solutions, Computer Hardware and Software

**Google Developers Student Clubs – University of Louisiana Monroe Duration:- 02/2023 – 09/2023**

* Spearheaded the organization of TechExpo, successfully showcasing innovative projects and attracting community participation.
* Collaborated with a diverse team to plan and execute technical workshops and events, enhancing campus engagement.
* Provided mentorship and leadership to club members, fostering a culture of innovation and learning. **Skills:** Team Collaboration, Mentorship, Project Management , Team Lead

## Projects

### **MinesweeperAI** | [GitHub |](https://github.com/sujandk/MinesweeperAI) -- Python, pygame

* Developed a Minesweeper game with a preset number of mines and AI-powered gameplay assistance.
* Implemented an AI model to make educated moves by leveraging a knowledge base for strategic decision-making.
* Enhanced gameplay with an AI-driven approach to improve user experience through intelligent and adaptive move. Designed AI fallback mechanism for random guessing in scenarios lacking sufficient data for calculated moves.

### **Cozy Mart |** [**Website |**](https://react-cozymart.netlify.app/) **--** ReactJS, Node JS

* Worked in a team of 3 to design, develope, and deploy a full-stack web application for a furniture sales business.
* Engineered a responsive user interface, cross-browser compatibility and mobile responsiveness, implementing features such as product listings, product description and ensuring cross-browser compatibility and mobile responsiveness*.*
* Effectively sold furniture through the ecommerce site, driving business growth and demonstrating the effectiveness of the web application.

### **Student Database |** [**GitHub |**](https://github.com/sujandk/stuentDatabase) **--** Java, Spring boot, PostgreSQL

* Developed a backend database system for efficient data management and retrieval. Optimized entity relationships and data mapping for improved database performance and data integrity.
* Configured JPA annotationsto automate ORM**,** reducing boilerplate code and enhancing readability.
* Implemented CRUD operations and RESTful APIs to facilitate seamless interaction between the database and frontend. Applied PostgreSQL indexing and query optimization techniques to improve data retrieval speed and system scalability.

### **SoundClassification|** [**Colab| -**](https://colab.research.google.com/drive/1U35-rk7yW_pT6-Nb8uAvjGPizxcXxYni?authuser=4#scrollTo=0QmBv9Mo5Sa8)**-** Python, Numpy, Matplotlib, Tensorflow, Librosa, Pandas

* Developed an audio classification model using a Feedforward Neural Network (FNN) with TensorFlow, achieving high accuracy on the UrbanSound8k dataset.
* Extracted and processed MFCC features from 8,000+ audio files, employing techniques like dropout regularization to prevent overfitting.
* Implemented real-time audio predictions, enabling automated sound classification into 10 distinct categories using a trained deep learning model.