# 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 programming comprising 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

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- 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

- 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**

# MinesweeperAl | GitHub | -- 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 Al-driven approach to improve user experience through intelligent and adaptive move. Designed Al fallback mechanism for random guessing in scenarios lacking sufficient data for calculated moves.

### Cozy Mart | Website | -- React JS, 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 | -- 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 annotations to 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 | -- 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.