

# Saramsh Gautam

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## EDUCATION

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### Louisiana State University

Baton Rouge, Louisiana

M.S. and Ph. D. in Computer Science

Expected Graduation, May 2026

- o **Concentration:** Human Computer Interaction (HCI)
- o **GPA:** 4.12
- o **Related Coursework:** Algorithm Analysis and Design, Programming Language Structure, Machine Learning, Artificial Intelligence, Database Management System, Object-Oriented Programming, Big Data, Statistics & Applications

### Tribhuvan University

Kathmandu, Nepal

Bachelor's of Engineering, Computer Engineering

Aug 2022

- o **Concentrations:** Computer Science, AI and ML
- o **GPA:** 4.00
- o **Related Coursework:** Object-Oriented Programming, Theory of Computation, Operating System, Data Structure and Algorithm

## SKILLS

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**Programming:** Python, JavaScript, HTML/CSS, SQL, Node.js, React.js, C++, C, C#

**Tools:** VS Code, Android Studio, IntelliJ, PyCharm, AWS, Jupyter Notebooks, Git, Bootstrap, Spring Boot, MySQL, MSSQL

**Frameworks:** Nodejs, TensorFlow, PyTorch, Flask, Spark

## EXPERIENCE

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### Louisiana State University

Baton Rouge, Louisiana

Research Assistant

Aug 2023 – Present

- Developed Multilingual Collaboration Tools: Created LINC, a tool for real-time multilingual transcription and post-meeting analysis, aiding ESL students in academic collaboration.
- Real-Time Audio Transcription with Whisper: Implemented and optimized real-time transcription using Whisper and WebSockets in a Python Flask backend.
- Data Visualization Integration: Designed visualizations like stream graphs, radar charts, and chord diagrams in React to enhance post-meeting analysis.
- Full-Stack Development: Coordinated Python Flask microservices with a React frontend for real-time collaboration and data persistence.
- NGINX Server Management: Configured NGINX and SSL for secure deployment of the application on university Linux servers.
- Study Design and Execution: Led studies, including need finding and evaluating the effectiveness of the tool, designing surveys, and conducting interviews.

### Louisiana State University

Baton Rouge, Louisiana

Teaching Assistant for CS 4444 (Artificial Intelligence)

Jan 2024 – Aug 2024

Teaching Assistant for CS 4402 (Database Management System)

Aug 2023 – Dec 2023

## PROJECTS

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### LINC: Language-INdependent Collaboration Tool

Baton Rouge, Louisiana

Team Lead

Aug 2024

- Developed a real-time multilingual transcription and post-meeting analysis tool to support collaboration among ESL students in academic settings.
- Integrated Whisper and WebSockets for real-time audio transcription with Python Flask backend.
- Utilized the OpenAI API for automatic translation, meeting summaries, and action items extraction from transcripts.
- Designed and implemented interactive data visualizations using D3.js for stream graphs and chord diagrams, and Chart.js for radar charts, enhancing the post-meeting analysis.

### Brain Tumor Detection (Python, CNN)

Kathmandu, Nepal

Team Lead

May 2021

- Created a convolutional neural network (CNN) model to predict the likelihood of a brain tumor.
- Developed a web-based user interface using HTML, CSS, and JavaScript.
- The software uses the trained model to predict the chance of having a brain tumor.

### Steganography Project (C#, Image Processing)

Kathmandu, Nepal

Team Lead

Jun 2020

- Developed software that hides data within images to ensure the security and privacy of information.
- Utilized AES encryption for enhanced protection.
- Achieved steganography using the Least Significant Bit (LSB) algorithm.

## ACTIVITIES AND LEADERSHIP

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### Nepalese Student Organization at LSU

Baton Rouge, Louisiana

President

Aug 2024 – Aug 2025

- Leader of an organization of 100+ members, hosting religious events, managing a board of executives, and reaching out to the underprivileged community in Baton Rouge