Nitin Kumar Singh

Email: nksgbc12@gmail.com
LinkedIn: nitin-kumar-singh
Mobile: +91 6207040427
Github: SedulousN

Education

- **JK Lakshmipat University, Jaipur, India** *August 2022 - June 2026*
  Bachelor of Technology - Computer Science and Engineering; CGPA: 8.6
- **IIT Gandhinagar, India** January 2024 – May 2024
  Semester Exchange Program-4th semester.
- **Himalayan International School, Patna, India** *May 2019 - April 2021*
  Intermediate in Science; Percentage: 81%
- **St. Paul's High School, Patna, India** *April 2019*
  Matriculation; Percentage: 92%

Projects

Analysis of India's Manufacturing Sector *Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn*

- Analysed the current state of India's manufacturing sector, to predict its growth by 2030, and evaluated its contribution to GDP.
- Used linear regression to forecast growth and conducted hypothesis testing to assess GDP contribution. Analysed global positioning and growth rate compared to other economies using data visualization tools in Python.
- Provided insights into sector trends, identified growth opportunities, and evaluated India's competitiveness in the global manufacturing landscape.

Gesture-Based Control System Using Microcontrollers and Sensors *Arduino IDE, PyAutoGUI*

- Created a system that enables gesture-based control for tasks like changing volume, play/pause audio/video and switching tabs using hand movements (left, right, up, and down).
- Developed a system utilizing microcontroller, Arduino nano and ultrasonic sensor to capture and interpret hand gestures (position), focusing on designing a user-friendly interface for seamless interaction.
- Successfully enhanced user interaction through hardware and software integration, allowing efficient control of tasks using intuitive hand gestures.

Sabrang Events Database Development *MySQL, ER Diagram Tools*

- Developed a database to store and manage details of Sabrang events, including participant information, schedules, and event logistics.
- Designed and implemented a relational database management system to ensure efficient data organization and retrieval, optimizing for performance and scalability.
- Enhanced event management and accessibility, enabling streamlined handling of participant data and event logistics through an organized database system.

Machine Learning Project: Image Classification *Python, TensorFlow, Keras, NumPy, Pandas, Matplotlib*

- Developed a machine learning model to accurately classify images into two categories: horses and sheep, improving image recognition capabilities.
- Created an image dataset of 100 images for each category through web scraping for training the model. Developed and trained a Convolutional Neural Network (CNN) model and compared its performance with the VGG16 model.
- The CNN model achieved an accuracy of 82%, while the VGG16 model achieved an accuracy of 80%, demonstrating the effectiveness of custom models for this classification task.

Snake and Number Guessing Games Development

- Developed interactive Snake and Number Guessing games using HTML, CSS, and JavaScript.
- Designed and implemented game logic, user interfaces, and responsive elements.

Skills Summary

- **Languages**: C/C++, Java, Python, HTML, CSS, JavaScript, SQL
- **Frameworks & Tools**: Scikit-Learn, TensorFlow, Keras, Tkinter, git, MySQL, CAD

Position of Responsibility

Core Coordinator, Coding Club

- Curated questions for quizzes and coding sessions, enhancing learning experiences for members.
- Organized and coordinated a coding event at Prodyogik, developing questions based on data structures for 1st, 2nd, and 3rd-year students.

Courses

- Object Oriented Programming
- Computational Data Analysis
- C Programming and Data Structures
- Database Management System
- Theory of Computing
- Fundamentals of Automation Engineering
- Essentials of Business Management
- Computer Organization and Architecture
- Machine Learning
- Data Structures and Algorithms II