# PRASHANT SINHA

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#### Summary

A highly motivated and detail-oriented Computer Science graduate with strong foundational knowledge in Java, Data Structures, OOPs, SQL, and Web Development. Passionate about building efficient, scalable, and user-friendly software solutions. Eager to contribute to a dynamic development team and grow through hands-on experience and continuous learning.

#### **Technical Skills**

Languages: Python, SQL, JavaScript

Technologies: ReactJS, MongoDB, HTML, CSS

Developer Tools: AWS Cloud Platform, Docker, Visual Studio, IntelliJ, Eclipse, Google Colab

AWS Services: EC2, Lambda, S3

#### **Education**

Chandigarh University, Punjab	2022 - 2025
Bachelor of Engineering in Computer Science and Engineering	
Chhotu Ram Rural Institute of Technology, New Delhi	2019 - 2022
Diploma in Electrical Engineering	
British English School, Bihar (CBSE)	2017 - 2018
Matriculation	

#### **Projects**

#### **Cloud-Based Real-Time Video Streaming with Adaptive Bitrate Optimization**

Jan 2025-May 2025

- Built a real-time video streaming system with 30% reduced latency using adaptive bitrate techniques.
- Achieved 40% improvement in playback smoothness by dynamically adjusting video quality based on network conditions
- Deployed on cloud infrastructure to support scalability for 1000+ concurrent users.
- Optimized bandwidth usage by up to 35% through efficient video encoding and streaming logic.

#### Music Genre Classification using KNN

July 2024 - Dec 2024

- Built a machine learning model using the K-Nearest Neighbors algorithm to classify songs into genres.
- Extracted audio features using LibROSA and trained the model on GTZAN dataset

## Suspicious Activity Detection Using AI/ML

Jan 2023-May 2023

- Trained the system to recognize strange behaviors like loitering or running using video data and LSTM models.
- Used AI models (YOLOv5 and DeepSORT) to find and track people in real-time.
- Set up instant alerts using a web app (Flask) and messages (Twilio) when something suspicious happens.

#### **Certifications**

## **Deep Learning and Reinforcement Learning - IBM/Coursera (Completed)**

- Successfully completed this online non-credit course covering deep learning, neural networks, and reinforcement learning.
- Gained hands-on experience with tools like TensorFlow and Keras, and implemented basic reinforcement learning algorithms.

### Developing AI Applications with Python and Flask - Authorized by IBM, offered through Coursera

- Successfully completed this online non-credit course covering deep learning, neural networks, and reinforcement learning.
- Gained hands-on experience with tools like TensorFlow and Keras, and implemented basic

reinforcement learning algorithms.

## **<u>JavaScript</u>** - Completed through Infosys Springboard

- Completed a certified course in JavaScript covering core concepts like variables, functions, DOM manipulation, and event handling.
- Gained practical experience by building interactive web pages and dynamic content using JavaScript