

AVANISH KUMAR SINGH

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SKILLS

- **Programming Languages & Tools:** Java, Python, SQL, AWS
- **Technical Skills:** Machine Learning, Natural Language Processing (NLP), LangChain, OOPs
- **Soft Skills:** Portability, Finding Solutions, Teamwork, Communication

WORK EXPERIENCE

SmartInternz – Machine Learning Intern **August 2023 – September 2023**

- Performed end-to-end **data analysis**, preprocessing, and **cloud deployment**, achieving 97.2% accuracy in scalable performance predictions.
- Developed an **XGBoost model** for employee performance prediction, achieving an R2 score of 0.83 and RMSE of 0.07, enabling data-driven decisions.

EDUCATION

Vellore Institute of Technology, Bhopal **2021 – 2025**

Bachelor of Technology in Computer Science & Engineering **CGPA – 9.14**

Specialized in Artificial Intelligence & Machine Learning

PROJECTS

Image Voice AI **January 2025**

- A Streamlit app was created Using **Hugging Face's BLIP model** for image-to-text, GPT-2 for text refinement, and **ESPnet** for text-to-speech synthesis.
- Integrated BLIP, GPT-2, and **ESPnet** for a seamless AI-driven experience, converting images to text and generating speech from refined text.
- Deployed the app on **AWS EC2 (t2.micro)**, using Python 3, and optimized for scalability and efficiency.

CPU Scheduler **May 2024**

- Developed a CPU Scheduling Simulator in **Java** with a user-friendly GUI, enabling the simulation of multiple CPU scheduling algorithms and real-time process execution.
- Launched a fully executable (.exe) file featuring enhanced visualization and achieving 90% accuracy.
- Utilized **Java Swing**, AWT, and **advanced data structures** (stacks, priority queues, arrays), and created an executable (.exe) file using Launch4j.

Traffic Signal Violation Detection **December 2023**

- Created an intelligent detection framework using advanced cameras to monitor roadways, reducing officer deployment by 60% and optimizing resource allocation for local law enforcement agencies.
- Implemented the solution with **Python, YOLOv3, OpenCV, TensorFlow** boosting efficiency by 30%.
- Achieved 90% accuracy in identifying violations.

CERTIFICATES

- **AWS Certified Solutions Architect Associate.** **February 2024**
- Artificial Intelligence and Machine Learning Powered by Google Developers. **August 2023**

EXTRA-CURRICULAR

- Core member of the AI club and sports club.
- Solved 300+ problems on [geeksforgeeks](#) and [Leetcode](#).
- Finalist in inter-branch football and badminton tournaments.