Abhishek Singh Kushwaha

B.Tech, Data Science & Artificial Intelligence, 2025
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EDUCATION

- **IIT Bhilai:** B.Tech, Data Science & Artificial Intelligence — Bhilai, Chhattisgarh
- **Modern Vidya Niketan:** CBSE Board, Class XII: 94% — Haryana, India
- **Vidya Mandir Public School:** CBSE Board, Class X: 94.3% — Haryana, India

EXPERIENCE

- **Software Developer Intern at NETR.AI** 🔗 — June'22 - November'22

  Collaboratively developed VR application for peripheral vision testing, leveraging C#, Unity, and Python, achieving 60% testing cost reduction and 90% machine cost decrease. Proficient in algorithm development and integration.

- **OpenLake Mentor IIT Bhilai** 🔗 — May'22 - May'23

  Organised web development workshop, led hackathon, and inspired 100+ IIT Bhilai students through engaging sessions.

SKILLS SUMMARY

- **Languages**: Python, C++, JavaScript, Latex, Bash Scripting
- **Frameworks**: TensorFlow, PyTorch, Langchain, React, Node, Express, Bootstrap, Tailwind, Flask
- **Tools**: AWS, Docker, MongoDB, MySQL, Firebase, Git, GitHub, Kafka, Nginx, Hadoop
- **Technical Skills**: Machine Learning, Data Analysis & Visualisation, Deep Learning, Computer Vision, Web Development, Competitive Programming (Leetcode rating: 1526 (highest)) 🔗, OOPS, Computer Networks, DBMS, DSA
- **Soft Skills**: Problem Solving, Analytical Thinking, Fast Learning, Team Management, Time Management

PROJECTS

- **Reverse-Chain** ⎔
  - Developed and implemented the Reverse Chain algorithm, as proposed in the paper "Reverse Chain: A Generic-Rule for LLMs to Master Multi-API Planning," to enhance the capabilities of Large Language Models (LLMs) in multi-API planning scenarios.
  - Leveraged technologies such as langchain, FAISS for retrieval, BERT embeddings from Hugging Face, and OpenAI API to orchestrate the end-to-end workflow, ensuring efficient and accurate planning across diverse application programming interfaces (APIs).

- **CloudPhyisician** ⎔
  - Created an innovative workflow utilizing CCTV footage to extract vital information from patient monitors, optimizing nurse-to-patient ratio and cost efficiency.
  - Integrated advanced technologies, including digital image processing, self-trained YOLO for segmentation, classifiers, and optical character recognition for accurate vital extraction. Used advanced concepts like, Threading, Data Structures & Algorithms to speed up the process.

- **SoreTrek** ⎔ ▶
  - Innovated an efficient inventory and sales management system with a user-friendly interface, leveraging visual data analytics for tracking sales, purchases, and inventory in real-time enhancing productivity.
  - Utilized Firebase (authentication) and Firestore (NoSQL database) for enhanced security and scalability. Implemented React hooks and Tailwind CSS for dynamic and visually appealing UI.

- **Automatic Image Clustering** ⎔
  - Python based image clustering project using face-recognition library, backed by C++ dlib library, to efficiently group images using the facial embeddings from the reference images.
  - Facilitating accurate identification and labeling of all relevant images featuring the same individual.

HONORS AND AWARDS

- Mentee at **Amazon ML School** 🔗 — November'23
- **Runner-up at the "iHack 2022" hackathon** 🔗 challenge on **Automatic Image Clustering**, organized by IIT Bhilai, IBITF, and Infineon Technologies as part of a three-member team. — October'22

COURSE WORK

- Artificial Intelligence
- Big Data Management
- Computer Networks
- Operating Systems
- Probability & Statistics
- Data Analytics & Visualisation
- Data Structures & Algorithms
- Statistical Programming