

PRAGYANAND SAHOO

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SKILLS & CERTIFICATIONS

- **Programming Languages:** C++, Java, JavaScript (ES6+), Python, SQL
- **Web Development:** HTML5, CSS3, Django, Flask, MERN Stack
- **Frameworks and Libraries:** Bootstrap, TailwindCSS, NumPy, Pandas, TensorFlow, OpenCV, Hugging Face Transformers, Langchain
- **Tools:** Git, VS Code, Anaconda, Slack, MS Office, Jira
- **Databases:** MySQL, MongoDB, PostgreSQL
- **Operating Systems:** Windows, Linux (Ubuntu)
- **AI and Data Science:** Computer Vision, Natural Language Processing, Deep Learning, Generative Modeling, Meta Learning
- **Certifications:** AWS Builders Online Series, Intro to Programming (Kaggle), Data Analytics with Specialization in Tableau, Deploy a Django Web App with AWS Elastic Beanstalk (2023)

PROFESSIONAL EXPERIENCE

CAIR Lab, IAI, DSVV

Research Associate

May 2024 – Present

Haridwar, India

- Researched generative AI for images and videos, focusing on Retrieval-Augmented Generation (RAG), AI transformers, and machine learning models.
- Developed an AI model for the Supreme Court to identify similarities between new and historical legal cases using RAG and Large Language Models (LLMs), improving legal case matching and analysis.
- Contributed to Innopat, an AI-based tool automating patent drafting, generating complete patent submissions from claim and Invention Disclosure Forms (IDF) using RAG, Langchain, and LLMs.
- Enhanced AI model training and deployment for real-world applications, contributing to research and product development in AI.

CAIR Lab, IAI, DSVV

Research Intern

Feb 2024 – May 2024

Haridwar, India

- Specialized in computer vision and optical character recognition (OCR), conducting research on handwritten document transformation using Document AI Transformers and open-source OCR models like DocTr.
- Developed an advanced OCR application using MERN stack and Flask for accurate handwritten text recognition.
- Created a face-recognition-based attendance system using Tkinter and Haar Cascade, eliminating manual attendance processes.
- Gained expertise in AI model training and deployment, building vision-based AI solutions.

Travel Vaidya

Web Development Intern

Jun 2023 – Jul 2023

Haridwar, Uttarakhand, India

- Improved Travel Vaidya's website performance and usability by transitioning from WordPress to a scalable Django-based platform.
- Optimized user experience and ensured site reliability through backend enhancements.

Dev Sanskriti Vishwavidyalaya

Web Development Summer Intern

Apr 2022 – May 2022

Haridwar, Uttarakhand, India

- Contributed to internal web development projects to support university operations.
- Developed web applications and enhanced digital infrastructure.

EDUCATION

Master of Computer Applications (Data Science Specialization)

Dev Sanskriti Vishwavidyalaya

- CGPA: 8.20/10

Haridwar, India

Sep 2022 – Jul 2024

Bachelor of Computer Applications (Computer Science)

Dev Sanskriti Vishwavidyalaya

- CGPA: 7.42/10

Haridwar, India

Aug 2019 – Jul 2022

PUBLICATIONS

- **Marma Point Detection and Personalized Ayurvedic Diagnosis using Computer Vision** (2025). Presented at IIT Mandi, under submission for publication.
- **AI-Monitors at GenAI Detection Task 1: Fast and Scalable Machine Generated Text Detection** (2025). *Proceedings of the 1st Workshop on GenAI Content Detection (GenAIDetect), International Conference on Computational Linguistics*.
 - Conducted fine-tuning experiments, analyzed parameter impacts (e.g., training epochs, input size), and drafted sections on experimental results, achieving a 5–6% improvement in accuracy and F1 score.
 - Developed a model to distinguish between machine-generated text and human-written text, achieving competitive accuracy.
 - Gained hands-on experience in natural language processing (NLP) and fine-tuning LLM for classification tasks.
 - Collaborated with team members to enhance model performance and interpret results effectively.

ACADEMIC PROJECTS

Sign Language Recognition System

Dev Sanskriti Vishwavidyalaya

2024

Haridwar, India

Food Center - E-commerce System

Dev Sanskriti Vishwavidyalaya

2022

Haridwar, India

COMPETITIONS & ACTIVITIES

- Actively participated in hackathons, competitions, conferences, and events.
- ICFAI, Haridwar University Ideathon:
 - Pitched an innovative idea during a hackathon organized by ICFAI, Dehradun University.
 - Presented the concept effectively, showcasing the potential impact and feasibility of the idea.
 - Engaged with judges and other participants, receiving positive feedback on the proposal.
- Participated in National Art Competition.
- Badminton player.
- Contributed to a social internship to encourage societal development.