

# **Diwan Singh Chauhan**

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Portfolio: - diwansinghchauhan.github.io/portfolio/

# **Objective**

To work in a dynamic and innovative tech environment where I can apply my skills in Python programming, data analysis, machine learning, deep learning and computer vision. I aim to contribute to real-time AI solutions by developing and deploying models using frameworks like TensorFlow and PyTorch. I am eager to work on end-to-end ML pipelines, model optimization and domain-specific applications such as object detection, face recognition and predictive maintenance.

## Skills Summary

- Data Science: Python, Machine Learning algorithm, Data Analyst, Data Visualization, Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Probability, Statistics, PowerBI, TensorFlow, Keras, PyTorch, Natural Language Processing, Computer Vision, OpenCV, Machine Learning, AI, ML, Analytics, Computer Vision, Deep Learning
- Soft Skills: Collaborator, Planner, Problem Solver, Analytical Skills, Multi-tasker, Flexible, Excellent verbal and written communication skills

## Internship

## Machine Learning Intern <u>CERTIFICATE</u>

LogicLens Solutions Private Limited | 07/2024 - 12/2024

- Designed and implemented real-time computer vision systems for facial recognition, object detection and video analytics using YOLO and FaceNet models.
- Developed and optimized deep learning models with TensorFlow, PyTorch and OpenCV.
- Collaborated with cross-functional teams to integrate AI models into real-world applications.
- Gained hands-on experience in video analytics and real-time surveillance systems.

## **Thesis**

#### CLUSTER ADAPTATION NETWORKS FOR UNSUPERVISED MULTI-TARGET DOMAIN ADAPTATION

- Developed a deep learning framework for fault diagnosis using unsupervised multi-target domain adaptation.
- Evaluated model performance using classification accuracy, macro F1 score and t-SNE visualizations for feature distribution.
- Compared the proposed method against state-of-the-art domain adaptation models to demonstrate superior generalization across multiple domains.
- Applied the approach to the CWRU bearing dataset, showing improved performance in diagnosing faults under varying operating conditions.

## **Projects**

## • Creating Automatic GIFs from Videos Link

- This project automates the process of creating GIFs from video files.
- It extracts audio, detects silences, transcribes them, and generates high-quality GIFs with text overlays.
- Powered by Python with libraries like moviepy, pydub, and Whisper for transcription, it simplifies the creation of engaging GIFs from your video content.
- Perfect for social media, tutorials, and presentations.

#### Book Recommender System Link

- This is a machine learning project built using python and flask app.
- It uses collaborative filtering and popularity-based filtering techniques to provide personalized movie recommendations.

- The system is deployed on Render, making it easily accessible via a web interface.
- Users can explore and discover movies based on their preferences and past ratings.

## Laptop Price Predictor Project <u>Link</u>

- Created a tool to predict laptop prices using linear regression.
- Developed a user-friendly interface with Streamlit to make it easy for users to interact with the predictor.
- Successfully deployed the app on Streamlit Community Cloud for wider accessibility.
- Demonstrated skills in machine learning, software development, and cloud deployment through this project.

## An API based NLP application created using Tkinter and OOP LINK

- NLP application constructed with Tkinter and OOP principles.
- Offers text analysis functionalities through APIs.
- GUI enables user-friendly interaction with the application.
- Users input text and conduct NLP analysis effortlessly.

#### Created Story on 120 Years of Olympic History on Tableau LINK

- Developed comprehensive Tableau visualization of 120 years of Olympic history.
- Highlighted key events, medal counts, and participating countries.
- Utilized data analytics techniques for insightful presentation.
- Employed visualization techniques for engaging and informative display.

#### Certifications

- Python Core Programming Course (05/2023 07/2023) CERTIFICATE
- Expert in Machine Learning & Data Analysis (07/2023 12/2023 CERTIFICATE
- Certified Quality Core tools by Quality Hub India (05/2020) CERTIFICATE
- Professional in Product Design in Auto Cad & Solid Woks.

#### Academic Credentials

M.Tech. (Data Science)

Defence Institute of Advanced Technology, Girinagar, Pune (2023-2025)

• M.Tech. (Metallurgical and Materials Engineering)

IIT ROORKEE (2014-2016) with 7.088 CGPA.

B.Tech. (Mechanical Engineering)

Galgotias College of Engineering & Technology (2009-2013), Secured 72.74% marks

• XII (Science)

Passed in 2008. Secured 78% marks.

• X (Science)

Passed in 2006. Secured 73% marks.

## Experience

#### Quality Assurance Engineer

Balaji Aluminium Extrusions Pvt. Ltd | 08/2017 - 07/2023

- Proficient in maintaining quality documents, conducting internal audits and implementing improvement methodologies like Kaizen and problem-solving techniques to enhance product quality.
- Skilled in utilizing advanced testing and inspection techniques, including statistical process control (SPC), metallography and CAD software (Solid Works), ensuring compliance with design specifications and technical standards.
- Experienced in root cause analysis, CAPA implementation and utilizing QC tools to address customer complaints, reduce rejection rates and drive continuous improvement initiatives throughout the production process.

# Personal Details

Linguistic Abilities: English, Hindi
Nationality: Indian

Marital status: Unmarried

Address: Udham Singh Nagar, Uttarakhand