

# Abhishek Singh

## Data Science Engineer

Expertise in AI/ML, NLP, Cloud Migration, and Data Pipeline Automation for Scalable Solutions.

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🌐 [Web | Portfolio](#)

[Linkedin](#)

[GitHub](#)

## EXPERIENCE

### EXL Service -Data Science Engineer

MAY 2023- PRESENT

- Collaborated with **USA's largest automobile company**: Worked closely with U.S. clients on a daily basis 1-on-1 following **agile practices**, gathering requirements, iterating on deliverables, and implementing solutions that align with fast-changing business demands.
- Implemented Data Governance for U.S. Operations: Established strict data governance protocols to ensure regulatory compliance and secure handling of sensitive data, aligned with U.S. client expectations.
- AI-Powered Forecasting Models: Integrated predictive analytics with **95%+ accuracy** and machine learning models to assist in forecasting trends..
- Developed **NLP Chatbots** for Internal **Automation**: Leveraged **LLMs**, Retrieval-Augmented Generation (**RAG**) technology, and **LangChain** to create intelligent chatbots that assist with system inquiries and efficiently retrieve data from large knowledge bases and **vector database** while maintaining contextual accuracy.
- Optimized chatbot performance by implementing custom embedding models and fine-tuning retrieval pipelines.
- Automated Data Pipelines: Developed and optimized **Python** and **SQL**-based workflows to streamline ETL processes cutting manual effort by 80%
- Optimized Cost and Efficiency: Identified and automated redundant tasks, cutting operational costs by up to 20% and improving delivery speed reducing query times by 50%
- Worked with **Petabytes** of organization's textual data.

### Newgen Software- *ML Software Engineer*

MAY 2022-JULY 2022

- Developed computer vision solutions using **YOLOv5** and **OpenCV** for real-time object detection and image processing.
- Implemented custom preprocessing pipelines to improve model robustness across varying image conditions.
- Fine-tuned YOLOv5 models to enhance detection accuracy and adapt to diverse datasets.
- Accelerated inference speed by optimizing model deployment and **hardware utilization**.
- Tech stack: **PyTorch**, Python, **HuggingFace**

## FELLOWSHIP

### K12 techno services-*Backend Software Engineer*

AUG 2021 - OCT 2021

- Worked as intern on backend for creating APIs using **Django** Rest framework for voice recording and saving files in databases with user registration.
- Developed a **soft delete** function/method which lets the user delete the data, but it stays in the database.
- Tech stack: Django, Python, PostgreSQL

## CERTIFICATIONS

- NVIDIA DLI Certificate - [Building Transformer-Based Natural Language Processing Applications.](#)
- NVIDIA DLI Certificate - [Fundamentals of Deep Learning](#)

## EDUCATION

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**Indian Institute of Technology (IIT) , Dhanbad**— *Bachelor of Technology in Computer Science and Engineering*

JULY 2019- MAY 2023

**D.A.V Public School (CBSE) - XII** (2017- 2019)

**D.P.S Public School (CBSE) - X** (2017)

## PROJECTS

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- **Real-vs-AI Classification**: Classifying real art images versus AI-generated art images using **RexNet150**. (GitHub)
- **Web-Scraper**: Automated the image scraping of an open source website to extract (1800+) AI-generated images with labels. (Kaggle)
- **Sentiment-Analysis**: Applying sentiment analysis on Amazon's product reviews. (GitHub)
- **Django-Video Subtitles**: Extracts all the available subtitle streams available from a video using *ffmpeg* , also lets you search the subtitles(eng) and skips to that timestamp. (GitHub)

## SKILLS

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- **Programming languages**: Python, JavaScript, SQL, C++
- **Application**: Ollama, MS-Office, Power BI,
- **Frameworks** : LangChain, Docker, Pandas, YOLO, HuggingFace, OpenCV, ONNX, Numpy, Pytorch, TensorFlow, Databricks, PySpark, Sklearn, Selenium , Git, Azure, Cloud, react, ml5.js

## ACHIEVEMENTS

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- **Winner**: Rock The Wagon, Concetto 2019, IIT (ISM), Dhanbad
- **Leetcode**: Solved (300+) problems.
- **Hackerrank**: 5\* in problem solving.

## EXTRACURRICULARS

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- Member of ARKA-Astronomy Club of IIT (ISM) Dhanbad
- Check my [Web | Portfolio](#) for more insights on my work and projects.
- **Creative coding**. Made intriguing visualizations using JavaScript.