

# Nishant Singh

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## OBJECTIVE

As an experienced AI/ML Engineer, my goal is to leverage my expertise in building scalable and efficient machine learning models to tackle real-world challenges in industries such as media, finance, and ecommerce. I am seeking a position that will allow me to apply my skills in data preprocessing, feature engineering, and model deployment to create customized AI/ML solutions that drive business growth and profitability. Additionally, I am committed to keeping up-to-date with the latest advancements in the field and staying at the forefront of emerging technologies.

## SKILLS

**AI/ML :** Linear Regression, Logistic Regression, Ensembles, K-means clustering, PCA, Keras, Tensorflow, Transformers, LSTM, BERT, GPT, T5 (Text-to-Text Transfer Transformer), RNN, Random Forest, OpenAI, Langchain, LlamaIndex

**Natural Language Processing :** Web Scraping, Text Mining, Stemming, Lemmatization, Tokenization, Named Entity Recognition, Rule Based Matching, Word2Vec, NLTK, Spacy, Glove.

**Data Analysis & Visualisation:** Numpy, Pandas, Dask, Matplotlib, Seaborn, Scikit Learn, Clustering.

**Python:** Regular Expression, Json, Web Scraping, OOPs, File Handling, Functional programming, Pydantic, Jolib, Tqdm, Boto3, Requests, ftplib, OpenCV, tkinter

**Backend:** Celery, RabbitMQ, Flask, Docker, Kubernetes, Grafana

**Version Control:** Git, Gitlab

**Database Systems:** MySQL, PostgreSQL, MongoDB, Redis, AWS S3, AWS Neptune (Gremlin), VSFTP, Pinecone

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## Self-Learning Projects

### **Multi-Document Q&A Chatbot Using Langchain, LLM and PineCone (Feb 2024)**

**Goal:** To build a contextual chatbot that can ingest multiple extension documents, embed and store them in a vector db. Generates responses based on questions asked by the user by fetching top 3 matching chunks of data from db.

**Technologies Used:** Langchain, OpenAi, Pinecone, HuggingFacehub, Flask, gpt-3.5-turbo, llama2

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## Projects

### **Vision+ Thumbnail Generation (<https://www.visionplus.id/>)**

MNC Group, **Role:** AI/ML Engineer, **Timeline:** November 2023 - Present

- Using YOLO, Deepface, Mediapipe, CV2 extract high quality thumbnails from videos on the basis of image quality, facial expression and object detection. And further enhance thumbnail quality with CV2.

### **Motion Trade (<https://www.motiontrade.id/>)**

MNC Group, **Role:** AI/ML Engineer, **Timeline:** May 2023 - November 2023

- **EDA:** Collect, visualize, decompose, check stationarity, transform, detect outliers, analyze correlation.
- **Data Gathering Pipeline.**
- **Model Training Pipeline.**
- **Recommendation Models:** Ridge regression for action prediction and price prediction.

### **RCTI+ (<https://www.rctiplus.com/>)**

MNC Group, **Role:** AI/ML Engineer, **Timeline:** February 2023 - May 2023

- **EDA:** Data wrangling, munging and cleaning.
- **User profiling:** Formulate user profiles by leveraging data on their past viewing behaviour, ratings, and pertinent demographic attributes to enrich the personalized user recommendations.
- **User Segmentation:** Performed user segmentation using k-mode clustering.
- **Recommendation Models:** Designed hybrid recommendation systems which includes collaborative filtering, because you watched(real time recommendation), and Preference and Recency based recommendation systems using Graph database, AWS Neptune (Gremlin).

### **Vision+ (<https://www.visionplus.id/>)**

MNC Group, **Role:** AI/ML Engineer, **Timeline:** January 2022 - January 2023

- **EDA:** Data wrangling, munging and cleaning.
- **User profiling:** Formulate user profiles by leveraging data on their past viewing behaviour, ratings, and pertinent demographic attributes.
- **User Preference Generation:** Generated user preferences using user behaviour data for personalized recommendation and user segmentation.
- **User Segmentation:** Performed user segmentation using mini batch k-means clustering, and evaluated the results using the Silhouette coefficient and the Elbow method.
- **Data Pipeline:** Created end-to-end data pipeline for large datasets of user demography and user behaviour data.
- **Recommendation Models:** Designed hybrid recommendation systems which includes collaborative filtering, preference based recommendation and content based filtering with AWS Neptune.

### **BuddyKu (<https://buddyku.com/>)**

MNC Group, **Role:** AI/ML Engineer, **Timeline:** December 2021 - January 2022

- Conducted unit testing for each model with predefined testing scripts and ensured model accuracy, reliability and availability in DEV, UAT and PROD.
  - Monitored the model's performance post-deployment to ensure it met expectations and requirements.
  - Implemented adjustments to the data pipeline based on the feedback obtained from the product team.
  - Improved existing AI/ML models by incorporating tags searched by the users.
  - Prepared testing and visualization scripts for the product team usage.
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## EXPERIENCE

### AI/ML Engineer

#### MNC Group, Gurgaon, December 2021 - Present

- Solved complex business problems with the help of machine learning.
- Setup data pipeline for data gathering, cleaning, wrangling and munging to ensure optimal performance during model training and evaluation.
- Presented AI/ML project outcomes and insights to stakeholders, driving data-driven decision-making and strategic planning.
- Collaborated with cross-functional teams to integrate AI/ML solutions into existing systems and workflows.
- Continuously monitored model performance, making updates and adjustments as needed to maintain accuracy and adapt to changing data patterns.

### Social Media Manager

#### Raj Bhavan, Uttar Pradesh, Lucknow, December 2019 - October 2021

- Managed social media accounts and activities for the Hon'ble Governor of Uttar Pradesh.
- Crafted and published timely, engaging content that highlighted the Governor's initiatives, resulting in an increase in audience engagement.

### Content Writer

#### Aadox, Lucknow, July 2019 - December 2019

- Create technical content for diverse industries and audiences.
  - Use SEO techniques for search engine visibility and deliver compelling content to effectively communicate client messages.
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## EDUCATION

### Bachelor of Engineering

Electronics & Telecommunication

Pune University, Pune, Maharashtra, 2011

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