

Ranjit Singh *Data Scientist.*

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<https://shorturl.ac/data-scientist>

PROFESSIONAL SUMMARY

Experienced Data Scientist with 1.5+ years in machine learning, specializing in natural language processing and Generative AI. Skilled in Python, SQL, large language modeling, computer vision, MongoDB, and AWS. Proficient in handling big data, with a focus on predictive modeling. Expertise spans machine learning and deep learning, contributing to innovative solutions. Demonstrated ability to extract insights from large datasets. Committed to staying at the forefront of technology. Passionate about pushing boundaries and delivering impactful results. Adept at solving complex problems in the dynamic field of data science.

PROFESSIONAL EXPERIENCE

Machine Learning Engineer

Upflairs Pvt. Ltd., Jaipur, Rajasthan | Sep 2023 – Present

- Led end-to-end development of machine learning projects, specializing in advanced natural language processing. Guided a diverse team of experts to translate business goals into effective technical solutions.
- Applied Generative AI and Large Language Models (LLMs) to elevate natural language processing, expanding capabilities in content generation.
- Demonstrated expertise in improving accuracy of machine learning and natural language processing models, and building robust data pipeline to manage the big data.
- Maintained NLP-based systems to classify text, achieving an 11% increase in accuracy and reducing false positives by 9%.
- Conducted EDA for actionable insights and maintained robust data pipelines.
- Maintaining MLOps pipeline with AWS deployment, ensuring seamless integration and efficient management of machine learning workflows and deployments.
- Exhibiting expertise in docker containerization for production deployment with AWS and Azure.

Data Scientist Intern (AI/ML/NLP)

Ineuron.ai Intelligence Pvt. Ltd., Bangalore | May 2022 – Apr 2023

- Developed NLP models for topic modeling and multi-labeling data science solutions.
- Implemented a predictive model using Supervised Xgboost to forecast insurance premium prediction; the model achieved 90% accuracy.
- Created data pipelines, tested and debugged code, constructed insightful Power BI dashboards, performed statistical analysis, and developed a data-driven web application.
- Developed and maintained NLP pipelines to process large volumes of text data, resulting in a 17% reduction in processing time.
- Successfully deployed applications across AWS, Azure, Heroku, and Railway platforms, meticulously utilizing CI/CD pipelines for streamlined and efficient deployment workflows.

EDUCATION

Bachelor of Engineering in Computer Science Engineering

Institute of Engineering and Technology, Agra | Sep 2020 – Aug 2023 | Percentage: 7.6%

Diploma in Computer Science Engineering.

M.G. Polytechnic Hathras | Jan 2017 – Jul 2020 | Percentage: 6.9%

Full Stack Data Science Certification Program

Ineuron.ai | May 2022 – Aug 2023 | Bangalore, Karnataka

TECHNICAL SKILLS

- **Programming Language:** Python, Java, SQL , HTML , CSS.
- **Database:** Mysql , Mongodb, Vector database, Amazon Relational Database, Amazon S3.
- **Data Science and Machine Learning:** Machine Learning, Deep Learning ,Natural Language Processing, Generative AI, Computer Vision, ANN , CNN , RNN , Statistical Analysis, Time Series Analysis, Large language models, Data Cleaning and Preprocessing, Data Visualization, Optimization and Model Tuning.
- **Machine Learning:** Supervised , Unsupervised , Regression , Classification ,Clustering , Dimension Reduction, Time Series Analysis , Predictive modelling, Recommendation System.
- **NLP:** RNN, LSTM, GRU, Chatbot Building, Sentiment analysis , NER, Text generation, Text summarization , Transformers , NLTK, Spacy, Langchain, Large language Models, Gemini, BERT, DISTILBERT , LLAMA2 , Gpt , LLM Fine tuning.
- **Computer vision:** CNN, image recognition, Object detection , YOLO, GAN, Pose Estimation, OCR.
- **Mlops:** Git & Github, Docker, CI\CD, Aws Deployment with CI\CD Pipelines.
- **Python Libraries:** Pandas, Numpy, Matplotlib, Seaborn, scikit-learn, Flask, Tensorflow, Pytorch, Keras, NLTK , Langchain, PySpark, OpenCV, Scipy, Beautifulsoop, socket, Transformers, XGBoost.
- **Web Frameworks:** Flask, Streamlit , Django.
- **Tools:** Power BI , Excel.
- **Cloud:** Amazon Web Services(AWS).
- **OS:** Windows , Linux.

PROJECTS

Ai Share Chatting App For Networking | Python , Socket , TCP/IP , Computer Vision , NLP , Tensorflow , NLTK.

Aim: Securely sharing files and communicating with each other in a organization using network.

- Enabled smooth sharing of text files, images, and PDFs, fostering intra-organizational communication via a robust network infrastructure that emphasizes efficiency and data confidentiality.
- Applied computer vision to validate images, enhancing content integrity. Developed screening measures to deny transfer of inappropriate or non-essential images, to ensuring application security.
- Applied natural language processing techniques to enhance communication speed, providing predictive word suggestions and a voice typewriter feature. Additionally, leveraged sentiment analysis for security purposes.
- Deployed NLP for real-time validation of text files and PDFs before sharing, ensuring content integrity. Implemented a robust screening process to deny sharing of any flagged or potentially harmful content for enhanced application security.

Dnamic AI ChatBot | Python , Tensorflow , Keras , Bert , Cosine Similarity , NER , NLTK , Flask.

Aim: Develope an AI-powered chatbot with exceptional flexibility and robustness, enabling easy customization of its behavior to meet diverse requirements with minimal effort.

- Developed NLP models to enable the chatbot to understand and respond effectively to user queries.
- Leveraged state-of-the-art AI methodologies to incorporate sentiment analysis and context awareness, enhancing the chatbot's conversational capabilities, as well as utilize the cosine similarity to respond effectively to user.
- Designed a user-friendly web interface that enabled non-technical users to interact with the chatbot and fine-tune its behavior by adjusting dataset parameters, no need to play with coding if chatbot behavior alteration required. project pipeline made the changes in chatbot behavior by determine the dataset parametes.

Reverse Image Search | Python, CNN, OpenCv, Pattern recognition, Resnet50, KNN, ML, Flask, AWS,

Aim: Search the products on the portal by putting image of the product.

- Developed a search bar where users can search for desired items by uploading their own images. My **CNN and ML** models return 5 similar images as an output from a database that, i prepared for this project. The database consists of **45k** images representing various fashion collection items. The process involves the CNN model extracting features from the input image, which are then used by the ML model to find similar images.

Insurance Premium Prediction | Python, ML, Flask, Sql, Aws, Docker.

Aim: To develop a sophisticated insurance premium prediction system capable of accurately estimating insurance premium prices based on clients' individual conditions and risk factors.

- Implemented an insurance premium price prediction web application using machine learning. Achieved 97% model accuracy by XGBoost. Deployed it on AWS utilizing CI/CD pipeline.
- Reduced the client risk with 97% accuracy, and enhance the freedom to choose the most suitable EMI plan to the client.
- Code written in modular fashion, used object oriented python concepts.