

# YUVRAJ SINGH

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## EDUCATION

### Bachelor of Technology

Lucknow,U.P | Jun 2018 Information Technology

## WORKEXPERIENCE

### XSPACES | Sr.AI/ML Engineer

Noida,U.P | May 2022 – Present

- Extensive experience in designing and implementing deep learning models using frameworks such as TensorFlow and PyTorch, including CNNs, RNNs, and transformers.
- Experienced with a variety of ML algorithms, including supervised and unsupervised learning, reinforcement learning, clustering, and dimensionality reduction.
- Skilled in data cleaning, normalization, and augmentation techniques to prepare datasets for model training and evaluation.Adept at deploying AI/ML models into production environments using tools such as Docker, Kubernetes, and cloud platforms like AWS, GCP, and Azure.
- Proficient in optimizing model performance through hyperparameter tuning and using tools like Grid Search and Random Search.Expertise in feature selection and engineering to enhance model performance and interpretability.

### PROVABTECHNOSOFT | Sr.Machine Learning Engineer

Noida,U.P | June 2021 - May 2022

- Experience with NLP techniques including text classification, sentiment analysis, named entity recognition, and language generation using models like BERT and GPT.
- Utilized frameworks and libraries such as Scikit-Learn, XGBoost, LightGBM, and H2O for building and training models.Skilled in visualizing data and model results using tools like Matplotlib, Seaborn, and Plotly to provide insights and support decision-making.
- Experienced in integrating AI/ML models into applications via APIs for real-time predictions and functionality.
- Strong problem-solving skills with a track record of tackling complex challenges and delivering innovative AI/ML solutions.

### SOFTWAYTECHNOLOGIES | AI Engineer

Noida,U.P | May 2019 – May 2021

- Built and maintained end-to-end ML pipelines for data ingestion, preprocessing, model training, evaluation, and deployment.Worked with big data technologies such as Apache Spark, Hadoop, and Dask to handle and process largescale datasets.
- Applied techniques for model interpretability and explainability, such as SHAP, LIME, and feature importance analysis, to ensure transparency and trustworthiness of AI systems.Implemented practices to ensure AI solutions comply with industry regulations and ethical guidelines, including data privacy and security standards.
- Collaborated with cross-functional teams including data scientists, engineers, and domain experts to drive AI initiatives and integrate models into business processes.

### SKILLQUOTIENT | Jr.Data Scientist

Noida,U.P | Jan 2018 – May 2019

- Developed real-time analytics solutions for monitoring and analyzing streaming data using technologies like Apache Kafka and Flink.
- Designed and executed robust testing strategies for AI models, including stress testing, unit testing, and integration testing to ensure reliability and performance.

- Utilized cloud-based AI services like AWS SageMaker, Google AI Platform, and Azure Machine Learning for scalable model training and deployment.
- Engaged in continuous learning and professional development through courses, certifications, and research to stay at the forefront of AI/ML technology.

## PROJECTS

### REAL-TIME OBJECT DETECTION SYSTEM

Python, TensorFlow, Keras, Apache Spark, AWS

Description: This project involved creating a system that predicts when industrial equipment is likely to fail, enabling preemptive maintenance to avoid costly downtime. The system collected real-time sensor data from machines, analyzed it to detect anomalies, and used predictive models to forecast potential failures. YOLOv4: Implemented for its high-speed and high-accuracy object detection capabilities, making it suitable for real-time applications. Faster R-CNN: Applied for more precise object detection and localization, especially useful in scenarios requiring high accuracy.

### ANOMALY DETECTION IN FINANCIAL TRANSACTIONS

Python, NLTK, SpaCy, BERT, Flask,

Docker, NLP

Description: Developed an anomaly detection system to identify unusual or fraudulent transactions in real-time. The system helped prevent financial fraud by flagging suspicious activities. Apache Spark: Managed and processed large-scale transaction data efficiently. Pandas: Used for cleaning and transforming data. Isolation Forest: Applied for detecting anomalies by isolating outliers in transaction data. Autoencoders: Utilized for learning normal transaction patterns and detecting deviations.

### AUTOMATED IMAGE CAPTIONING SYSTEM

Description: Developed a system that generates descriptive

captions for images, enabling automatic tagging and content creation. The system combined deep learning models to understand and describe visual content. CNN-RNN Architecture: Leveraged convolutional neural networks (CNNs) for extracting image features and recurrent neural networks (RNNs) for generating captions. Attention Mechanisms: Enhanced the model's ability to focus on relevant parts of the image when generating captions. AWS Lambda: Enabled serverless execution of the image captioning service. Docker: Containerized the application for easy deployment and scalability.

## SKILLS

Languages: JavaScript, HTML5, CSS, TypeScript, Sass/SCSS, GraphQL, Markdown, XML, Python, R, Java, and SQL.

Machine Learning: Supervised and Unsupervised Learning Regression, Classification, Clustering Ensemble Methods (Random Forest, Gradient

Boosting, Support Vector Machines), Deep Learning: Neural Networks, Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Long Short-Term Memory (LSTM), Generative Adversarial Networks (GANs), Variational Autoencoders (VAEs).