Ravindra Nath Prakash

Data Scientists

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Technical Skills

Programming & Tools ● ● ● ● ●
[Python,Git & GitHub, Jupyter Notebook, VS Code, Google Colab]

Data Handling ● ● ● ● ●
Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Feature Engineering, EDA

Machine Learning ● ● ● ● ○
[**Supervised:-**Linear/Logistic Regression, SVM, Random Forest, XGBoost, LightGBM,**Unsupervised**:-K-Means, DBSCAN,**Evaluation:**-Cross-Validation, Confusion Matrix, ROC-AUC, F1 Score, RMSE]

Computer Vision ● ● ● ○ ○
[Image Classification, Object Detection (YOLO, SSD, Faster R-CNN),Image Preprocessing (OpenCV, PIL), Image Augmentation,Projects using CNN, ResNet, MobileNet, and transfer learning]

Web Development & App Integration ● ● ● ○ ○
[Next.js(frontend dashboards),Streamlit (serving models via APIs),RESTful APIs]

Model Deployment & MLOps ● ● ● ● ○
[**Deployment:** Docker, FastAPI, Streamlit, Heroku, Render,**CI/CD:** GitHub Actions,Monitoring: MLflow, Weights & Biases]

Generative AI & AI Agents ● ● ● ○ ○
[**Generative Models**:-Text Generation (Gemini),Image Generation (DALL·E, Stable Diffusion),
Agentic AI:-Building multi-step intelligent agents using LangChain, **AI Agents**:-AutoGPT, CrewAI,Task automation, tool integration, and memory-augmented reasoning]

Math & Statistics ● ● ● ● ○
Linear Algebra, Calculus, Probability, Descriptive & Inferential Statistics, Hypothesis Testing

Deep Learning ● ● ● ● ○
[Neural Networks, CNNs, RNNs, LSTM,Frameworks: TensorFlow, Keras, PyTorch]

Natural Language Processing (NLP) ● ● ● ● ○
[Text Preprocessing, TF-IDF, Word Embeddings (Word2Vec), Transformers (BERT, GPT),Libraries: NLTK, spaCy, Hugging Face Transformers]

Databases & Tool ● ● ● ● ●
[MongoDB,MySql,PowerBI, Tableau]

Projects

1. **Text Generation for Customer Support Automation**

Objective: Built an AI-powered chatbot using GPT to automate customer support, reduce response time, and boost satisfaction.
Tools & Techniques: Python, OpenAI GPT API, TensorFlow, PyTorch, NLP preprocessing, fine-tuning, prompt engineering

- Collected and preprocessed customer support transcripts, removing sensitive data
- Fine-tuned GPT model on domain-specific conversations to improve response relevancy
- Integrated into a web app to handle FAQs and personalized queries using FastAPI
- **Result:** Achieved 30% reduction in average response time and increased user satisfaction

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2. Image Classification for Quality Control

Objective: Automated defect detection in products using real-time image classification.
Tools & Techniques: Python, OpenCV, TensorFlow/Keras, AWS, CNN, Transfer Learning (ResNet, VGG)

- Applied image preprocessing: resizing, normalization, augmentation
- Trained CNN on labeled defect datasets and implemented ResNet for improved accuracy

- Deployed on AWS Lambda for real-time image analysis
- Enabled instant identification of defects on the assembly line

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3. AI-Powered Speech Emotion Recognition

Objective: Developed a real-time system to classify human emotions (e.g., happy, sad, angry, neutral) from speech.

Tools & Techniques: Python, Librosa, Scikit-learn, Random Forest,NumPy, Matplotlib

- Extracted MFCC, Chroma, and Spectral features from speech using librosa for robust emotion classification
- Trained and evaluated models including Random Forest, Logistic Regression, and Naive Bayes; achieved up to **92% accuracy**
- Assessed performance using confusion matrix, ROC-AUC, and classification report
- Deployed an interactive web app for live user testing and demonstration

Professional Experience

09/2022 – present
hyderabad, India

Junior Data Scientist & Machine Learning Engineer
Sysarket Datasol Pvt. Ltd
killed in extracting actionable insights from complex data using machine learning, statistical analysis, and data visualization. Experienced in building predictive models, deploying ML solutions, and working with tools like Python, SQL, Power BI, and Tableau to solve real-world business problems. Proficient in **Generative AI** for text, image, and data generation using models like GPT, DALL·E, and Stable Diffusion to create intelligent, creative, and automated solutions.

06/2020-08/2022

Competitive Exam Instructor (Math, Reasoning & Computer)
Own Institute and Other Institute (online and offline both)
Taught General Competition subjects including Mathematics, Reasoning, and Computer Awareness to students preparing for SSC, Banking, JSSC, and other government exams.

01/2018-04/2020

Data Entry Operator
Alok Industries Textile Company
Responsible for accurate and efficient data entry in Excel sheets, maintaining textile inventory records, updating production logs, and assisting in report preparation. Attention to detail and basic Excel skills required.

Profile Summary:-Data Scientist with over 3 years of experience in analyzing and interpreting complex data to drive informed business decisions. Skilled in predictive modeling, data visualization, and statistical analysis, with hands-on expertise in Python and SQL. Recently engaged in generative AI projects, leveraging machine learning and natural language processing to create advanced, automated solutions. Known for strong analytical skills and a proactive approach to problem-solving, with a focus on using data-driven insights to optimize processes and enhance decision-making.

EDUCATION: Master of Computer Applications (MCA), Dr. C.V. Raman University, Chhattisgarh, 2018 (73%)
Bachelor of Computer Applications (BCA), Punjab Technical University, Punjab, 2015 (72%)

ADDITIONAL INFORMATION

- Languages: English, Hindi
- Interests: Playing chess