RAKTIM PATAR

Data Scientist

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Data Scientist with 4+ years of software engineering experience delivering production-grade AI systems. Skilled in building, fine-tuning, and deploying deep learning models for Computer Vision, NLP and LLM-powered Generative AI applications with measurable business impact. Proven record of improving model accuracy by 77% and cutting deployment time by 30% through scalable MLOps pipelines.

SKILLS & TECHNOLOGIES

- **Machine Learning & AI** : PyTorch, TensorFlow, Scikit-learn, Transformers, LangChain, Generative AI, OpenCV, Librosa
- **MLOps & Cloud** : Docker, Kubernetes, AWS (Sagemaker, S3), GCP (Vertex AI, GCS), GitHub Actions, CI/CD, Model Monitoring, Model Registry
- **Backend & Tools** : Python, Golang, JavaScript, FastAPI, Flask, Django, Streamlit, Node.js, Tableau, Power BI
- **Data & Analytics**: Pandas, NumPy, PostgreSQL, MySQL, BigQuery, Snowflake
- **Visualization**: Tableau, Power BI

WORK EXPERIENCE

Software Engineer - ML | Nanonets (Crewscale) | Remote (India)
Dec 2022 - Jul 2024

- Designed and deployed AI-driven document understanding systems, improving extraction accuracy by 18%.
- Built end-to-end MLOps pipelines using Docker, AWS ECS, and GitHub Actions, reducing deployment cycles by 30%.
- Engineered and containerized on-prem client builds with Kubernetes for scalability and performance.
- Developed table detection APIs and data migration tools, improving annotation efficiency by 40%.
- Collaborated with ML researchers and backend teams to productionize ML prototypes.

Python Developer | Infrrd.ai | Bengaluru, India
May 2022 - Oct 2022

- Improved text extraction accuracy by 77% in the IDP platform through optimized OCR model wrappers.
- Built and deployed a Dockerized Flask service processing 21K+ JSON collections daily, boosting throughput 4x.
- Conducted unit and integration testing with Pytest, improving reliability by 35%.

Full-Stack Developer | Code Astra LLP | Remote
Oct 2021 - Feb 2022

- Developed a grading REST API for Founder's Institute (FI.co) to evaluate founder performance and restructured the FI.co website to improve user experience.

Associate Software Engineer | Harman International (Samsung) | Bengaluru, India
Oct 2020 - Oct 2021

- Created HAL layer automotive cluster applications and designed a centralized control environment, reducing hardware execution time by 80%.

Data Science Intern | Tyroo Technologies | Gurugram, India
May 2019 - Oct 2019

- Built a CNN + OpenCV API for automated ad image background removal, increasing ad throughput 4x.
- Delivered a deployable service that reduced manual editing time by 80%.

EDUCATION & CERTIFICATIONS

Scaler Academy - Data Science and Machine Learning
Aug 2024 - Nov 2025 (Expected)

Intensive, project-based program focusing on advanced deep learning, LLMs, Generative AI, production-grade MLOps, and scalable AI systems.

Integrated Dual Degree (B.Tech + M.Tech), Information Technology, ABV IIIT Gwalior
Jun 2015 - May 2020

PROJECTS

CogniDoc: RAG-based Document Analysis Platform

- Built a Retrieval-Augmented Generation (RAG) pipeline integrating LLMs (Large Language Models), Transformers, and FAISS for intelligent document querying and Generative AI-based summarization.
- Leveraged LangChain and prompt-engineering techniques to enable context-aware document Q&A.
- Enabled semantic search and summarization across 1K+ documents, reducing manual lookup time by 70%.
  Tech Stack: *LangChain*, *Transformers*, *PyTorch*, *Streamlit*, *FAISS*, *Docker*

FocalPoint AI: Image Segmentation Tool

- Deployed high-precision image segmentation models using DeepLabv3-ResNet101 integrated with streamlined MLOps pipelines and automated model monitoring.
- Achieved 95% segmentation accuracy processing multiple images daily.
  Tech Stack: *PyTorch*, *TorchVision*, *OpenCV*, *Streamlit*

AcousticSense: Real-Time Urban Sound Classifier

- Designed CNN for real-time sound classification with 90% accuracy across 10 sound categories.
- Implemented MFCC feature extraction via Librosa with <200ms inference latency.
  Tech Stack: *PyTorch*, *Librosa*, *Scikit-learn*

Skin Cancer Classification

- Fine-tuned MobileNetV2 on HAM10000 dataset achieving 92% validation accuracy.
- Demonstrated effective application of transfer learning for healthcare imaging.
  Tech: TensorFlow, Keras, Streamlit

Portfolio & Demos: raktimpat.github.io | CogniDoc | FocalPoint AI | GitHub | AcousticSense | SkinCancerDetection