Naman Pandey

Data Scientist & AI Engineer

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SUMMARY

Versatile Software Engineer with 6+ years of cross-industry experience. Proven track record of implementing end-to-end AI solutions, NLP solutions, and computer vision systems across healthcare, finance and industrial sectors, including Neural networks, GenAI models, chatbots, and computer vision solutions. Expert in Python development alongside cloud AI services using GCP, Azure and MLOps. Strong background in handling large-scale data, managing cross-functional teams and driving technical decisions across multiple projects.
Currently building healthcare-focused ML pipelines at Blatchford Mobility. Eligible to work unrestricted in the UK and India.

WORK EXPERIENCE

Data Scientist - R&D, Blatchford Mobility, United Kingdom **Apr 2024 - Present**

- Architected end-to-end ML pipelines for processing and analysing large multimodal medical sensor datasets.
- Developed ML models for Gait Phase Identification and abnormal gait detection in patient data.
- Implemented MLOps practices in Azure and governance protocols for handling sensitive healthcare data.
- Mentored team members and contributed to technical decision-making across departments.

Machine Learning Engineer, Mercor, United States (Remote) **Apr 2024 - Aug 2024**

- Engineered scalable ML pipelines for open-source LLM deployment using TensorRT-LLM and vLLM.
- Developed C++ and Python benchmarking scripts for performance validation of large-scale models.
- Implemented CI/CD pipelines with automated testing, along with documentation for reproduction and maintenance.

Research Assistant, Brunel University, United Kingdom **Jul 2023 - Aug 2023**

- Developed and deployed production-ready conversational AI chatbots using Python, LangChain and GPT-3 APIs.
- Led research on LLM applications in academic contexts, focusing on NLP and user interaction.

Process Analysis Engineer, Pressco Technology Inc., United States **May 2017 - Aug 2022**

- Led cross-functional teams in implementing machine vision solutions for 50+ projects across F&B and pharma sectors.
- Developed production-grade automated quality control systems using computer vision algorithms.

Software Developer, Tata Consultancy Services Ltd., India **Jul 2016 - May 2017**

- Adapted to dual roles as both software developer and tester as needed, ensuring project continuity and timely delivery.
- Engineered REST APIs for data integration between legacy and modern systems, for Finance and Insurance clients.
- Implemented automated data validation pipelines reducing manual effort by 50%.

EDUCATION

Brunel University, London, United Kingdom - *Master of Science (M.Sc.), Artificial Intelligence* **Sep 2022 - Sep 2023**
Grade: Distinction

Birla Institute of Applied Sciences, Bhimtal, India - *Bachelor of Technology (B.Tech.), Computer Science* **Jul 2012 - Jun 2016**

SKILLS

Machine Learning	:	PyTorch, TensorFlow, Scikit-Learn, Keras, Neural Networks, Time Series Analysis
Data Analysis & BI	:	Python, R, NumPy, Pandas, SciPy, A/B Testing, Tableau, Power BI, Excel
GenAI	:	GPT4, BERT, RAG, Vector DB, LangChain, Streamlit, TensorRT-LLM, vLLM
NLP	:	Transformers, SpaCy, NLTK, Tokenization, Embeddings, Sentiment Analysis
Computer Vision	:	OpenCV, Image Processing, Medical Imaging, UNET, Encoder Decoder Models
MLOps	:	Docker, CI/CD, Git, Kubernetes, Azure DevOps, Weights and Biases
Cloud AI	:	Google Cloud Platform (GCP), Azure, Vertex AI, OpenAI
Database	:	PostgreSQL, MongoDB, MySQL, Vector DB
Development	:	Python, SQL, C++, Shell Scripting, FastAPI, REST APIs, Flask, Node.js, React.js

RELEVANT PROJECTS

Dialogue Insights Generator - An Innovative NLP Solution, Link **Jan 2024 - Mar 2024**

- Developed a production-ready GenAI application that transcribes conversations and generates psychological profiles using GPT-3.5 and custom NLP pipelines. Built and deployed end-to-end solution on Google Cloud with Docker containerisation, integrating speaker diarization, sentiment analysis, and automated insights generation with 99.9% reliability.

Enhancing Brain Tumour Segmentation in 3D MRI Images - Computer Vision Research, Link **Feb 2023 - Sep 2023**

- Developed advanced deep learning architectures to improve 3D brain tumour identification in MRI images, by integrating Attention Mechanisms, Recurrence, Multi-objective Loss, Deep Supervision, and Swin Transformers in the original UNet Architecture. These models, created from scratch in Pytorch and trained in parallel over 8 Nvidia A6000 GPUs, surpassed standard benchmarks in terms of segmentation performance, by over 4% in terms of dice scores and sensitivity.