Amanpreet Ahluwalia

University of Hertfordshire

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PROFILE

Creative and delivery-focused AI/ML Engineer with 5+ years of IT experience and hands-on AI project delivery, currently focused on building LLM powered applications to solve real-world problems through intelligent automation and ethical AI design. Proven ability to deploy end-to-end ML pipelines, create real-time RAG assistants and work with modern stacks.

Passionate about staying at the cutting edge of GenAI and deploying impactful tools that blend engineering, data science and user-centric design.

WORK EXPERIENCE

AI/ML Engineer Intern | 3NS.AI, London   **Feb 2025 to Present**

- Deployed AI-driven extraction pipelines using LLaMA, DeepSeek, Mixtral etc automating structured data extraction from complex documents and reducing manual effort by 60%.
- Created a due diligence audit tool that retrieves live business metrics and generates automated reports using LLMs. Explored structured summarisation with LlamaIndex.

IT Specialist | Bristlecone India Ltd. (A Mahindra Group Company), India   **Aug 2019 to Oct 2024**

- Developed AI-powered analytics dashboards, integrating Google APIs to automate EDI workflows, improving decision-making efficiency by 25%.
- Built ML-driven models for cash flow forecasting and intercompany risk prediction.
- Optimised O2C workflows by connecting Oracle NetSuite's SuiteFlow and SuiteScript 2.0/2.1 with Salesforce, reducing processing time by 30%.
- Established 40+ EDI trading partners while optimising AI system scalability, increasing deployment flexibility by 30%.
- Crafted   a Business Model Analysis System, leveraging LLMs to generate insightful business reports and visualisations, enabling 30% faster decision-making for stakeholders.

SKILLS

Data Integration, Project Management, Workflow & Design Standards, LLMs, Deep Learning, Reinforcement Learning, NLP, Neural Networks, Gen AI, Neuro-Linguistic Programming

- Programming: Python, SQL, Java, C#, R.
- AI/ML Frameworks: scikit-learn, XGBoost, PyTorch, TensorFlow, Keras, Transformers.
- LLM & RAG: LangChain, HuggingFace, FAISS, LlamaIndex, Pinecone.
- Data Analytics: Pandas, NumPy, Matplotlib, Seaborn, Feature Eng., RStudio, MATLAB.
- MLOps & Deployment: Streamlit, REST APIs, MLflow, Docker, Jenkins, Flask, FastAPI.
- Cloud: PostgreSQL, MongoDB, SQLite, Streamlit Cloud, AWS, Azure.
- Tools & IDEs: PyCharm, VSCode, Jupyter Notebook, Google Colab, GitHub Codespaces.
- Additional Tools: ROS Noetic, NetLogo, Unity, GitHub, Salesforce, Jira, EDI, NetSuite.

ACHIEVEMENTS

- 10+ Spot Awards for exceptional team performance at Bristlecone India Ltd.
- Recognised for achieving a 5-year career milestone with consistent contributions to IT.
- Mentored 50+ students during NVIDIA workshops to debug and optimize real-time AI models.

EDUCATION

- **Master of Science in Artificial Intelligence and Robotics** – *University of Hertfordshire, UK* **2024**
- **Postgraduate Diploma in IT Management –** *Symbiosis University, Pune* **2019 - 2021**
- **Bachelor of Information Technology Engineering –** *MIT, Pune* **2014 - 2018**

PROJECTS

Chat with Your PDFs (RAG-Based Assistant)

- ➤ Built a Retrieval-Augmented Generation system to allow natural language queries over PDFs using vector embeddings and LLMs.
- ➤ Deployed a scalable interface that can parse financial documents and return structured answers

PV Output Prediction

- ➤ Designed and implemented the regression model to predict photovoltaic power/energy output based on real-time weather and solar radiations.

Health Insurance Cost Predictor

- ➤ Implemented a regression model that predicts insurance premiums based on user lifestyle and demographic data.

Autonomous Vehicle simulation

- ➤ Programmed robot car for autonomous navigation to navigate a virtual track using Raycast sensors and C# scripting for real-time obstacle avoidance and adaptive path planning.

Mental Health Data Analysis

- ➤ Analysed mental health treatment behaviors using RStudio, implementing chi-square hypothesis testing to identify key trends and confounding factors, resulting in actionable insights for improving employee mental health strategies.

Diabetes Prediction System

- ➤ Designed a classification model achieving 93% accuracy for diabetes prediction using BMI.
- ➤ Optimised preprocessing pipelines, reducing data handling time by 35%, ensuring scalability.

CERTIFICATIONS

NVIDIA Fundamentals of Deep Learning

- ➤ Achieved 98% accuracy on image classification models using CNNs.
- ➤ Reduced training time by 40% using efficient parameter tuning and scalable architectures.

NVIDIA Applications of AI for Predictive Maintenance

- ➤ Engineered XGBoost, LSTM and autoencoders for predictive maintenance and anomaly detection via leveraging GPU-accelerated frameworks like NVIDIA RAPIDS and TensorFlow/Keras.

Microsoft Responsible AI Hackathon

- ➤ Constructed a web-based interface, real-time dashboards and automated workflows using Power platform tools including Power Automate, PowerFabric with hands-on experience in ethical AI design, fairness and governance principles.

Electronic Arts Software Engineering Virtual Experience (Jr. Software Developer | Dec 2024**)**

- ➤ Crafted a new feature for EA Sports College Football in C++ alongside optimising data structures.

BCG GenAI (Data Scientist | Forage | January 2025)

- ➤ Developed an AI-powered financial chatbot for BCG's GenAI Consulting team, integrating and interpreting complex financial data from 10-K and 10-Q reports.

Accenture UK Developer Virtual Experience (Software Developer | Accenture | Jan 2025)

- ➤ Gained SDLC knowledge, algorithm design and feature engineering experience in Agile practices.