

Amanpreet Ahluwalia

University of Hertfordshire

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PROFILE

Creative and delivery-focused AI/ML Engineer with 5+ years of experience in enterprise automation and applied AI. Currently focused on building LLM powered applications for real-world impact using ethical AI principles, thoughtful design and intelligent automation. Proven ability in deploying end-to-end ML pipelines, developing real-time assistants and working across modern GenAI stacks.

Passionate about delivering scalable, user-centric AI solutions that blend engineering, data science, and product thinking.

WORK EXPERIENCE

AI Specialist Intern | GBCS Group

May 2025 to Present

- Developing AI-based functionalities for React-based frontend projects.
- Defining requirements for AI libraries and technologies to meet project specifications.

AI/ML Engineer Intern | 3NS.AI, London

Feb 2025 to April 2025

- Deployed Gen AI-driven extraction pipelines using LLaMA, DeepSeek, Mistral etc automating structured data extraction from complex documents, improving audit report accuracy by 40% 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.
- Collaborated cross-functionally via Slack and Confluence to align AI/ML projects with business goals, optimising 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

AI Engineering Machine Learning, NLP, Computer Vision, Retrieval-Augmented Generation, Deep Learning, Generative AI, Reinforcement Learning, MLOps, Data Analytics, Responsible AI

- Programming Languages: Python, SQL, JavaScript, Java, C#, R.
- AI/ML Frameworks: Scikit-learn, XGBoost, PyTorch, TensorFlow, Keras, Transformers.
- LLM & RAG Tools: LangChain, HuggingFace, FAISS, LlamaIndex, Langgraph, Pinecone.
- Data Analytics: Pandas, NumPy, Matplotlib, Seaborn, Feature Eng., RStudio, MATLAB.
- MLOps: Gradio, Streamlit, MLflow, Supabase, Docker, Jenkins, Flask, FastAPI, AWS Sagemaker, REST APIs.
- Cloud: PostgreSQL, MongoDB, SQLite, Streamlit Cloud, AWS, Azure.
- IDEs: Vision Studio, PyCharm, VSCode, Jupyter Notebook, Google Collab, Code spaces.
- 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.
- Mentored 50+ students during NVIDIA workshops to debug and optimise 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% in PyTorch.

CERTIFICATIONS

NVIDIA Fundamentals of Deep Learning (2024)

- Completed GAIA benchmark for autonomous AI agents, developing a LangChain-based AI agent using LLMs and tool use.

NVIDIA Fundamentals of Deep Learning (2024)

- 98% accuracy on image classification tasks using CNNs with optimised pipelines.

NVIDIA Applications of AI for Predictive Maintenance (2025)

- Built predictive maintenance systems using XGBoost, LSTM and Autoencoders with GPU-accelerated tools like RAPIDS and TensorFlow.

Microsoft Certified: Azure AI Fundamentals and Responsible AI Hackathon (2025)

- Attended Microsoft AI Conference and built AI dashboards using PowerAutomate and PowerFabric. Completed certification covering ML, NLP, computer vision and generative AI aligned with the AI-900 exam.

BCG GenAI (Data Scientist | Forge | 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.