Amanpreet Ahluwalia

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GitHub | LinkedIn

PROFILE

AI enthusiast with 5+ years of IT experience in system integrations, customisations and automation. Expertise in developing and deploying AI/ML models with a focus on financial services, cryptographic AI and AI-driven robotics optimisation. Passionate about advancing AI applications in these areas and specialising in multimodal AI and LLMs. Continuously expanding expertise by attending academic conferences on AI trends and research.

Driven to leverage AI to innovate and solve real-world challenges in technology and finance.

EDUCATION & QUALIFICATIONS

Master of Science in Artificial Intelligence and Robotics – *University of Hertfordshire, UK*

Teaching Assistant – NVIDIA Deep Learning & AI Workshops

- Mentored 50+ students in AI/ML workshops, guiding hands-on projects in Deep Learning & Predictive Analytics.
- Debugged AI models (CNNs, XGBoost, LSTMs) in real-time, optimising student model performance.

Postgraduate Diploma in IT Management – *Symbiosis University, Pune*

Bachelor of Information Technology Engineering – *MIT, Pune*

WORK EXPERIENCE

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

- Deployed AI-driven solutions using LLaMA, DeepSeek, Mixtral etc automating structured data extraction from complex documents and reducing manual effort by 60%.
- Engineered prompts to improve JSON output from PDFs, enhancing data accuracy by 40% while implementing logging mechanisms for better LLM performance tracking and debugging.
- Developed a Business Model Analysis System, leveraging LLMs to generate insightful business reports and visualisations, enabling 30% faster decision-making for stakeholders.

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

- Developed AI-powered analytics dashboards, integrating Google APIs to automate real-time EDI data processing, improving decision-making efficiency by 25%.
- Led AI-driven financial data automation, optimising order-to-cash workflows by integrating Oracle NetSuite with Salesforce, reducing processing time by 30%.
- Implemented ML-based predictive analytics models for intercompany financial transactions, enhancing cash flow forecasting and risk mitigation.
- Automated workflow optimisations using SuiteFlow and SuiteScript 2.0/2.1, improving accuracy thereby reducing manual interventions.
- Designed and deployed REST APIs for financial data processing, incorporating ML-based anomaly detection to ensure fraud prevention in third-party integrations.
- Established 40+ EDI trading partners while optimising AI system scalability, increasing deployment flexibility by 30%.
- Designed dashboards leveraging advanced AI frameworks, cutting reporting times by 25% and improving decision-making efficiency.

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.

SKILLS

Data Integration, Project Management, Workflow & Design Standards, LLMs, Deep Learning, Reinforcement Learning, NLP, Neural Networks, Generative AI, AI for Robotics

- ML Framework/Tools: PyTorch, Keras, TensorFlow, Scikit-learn, OpenCV, NVIDIA RAPIDS
- Data Visualisation: Pandas, NumPy, Matplotlib, RStudio, MATLAB, PowerBI.
- Programming Languages: Python, Java, C#, JavaScript, R.
- Additional Tools: ROS Noetic, NetLogo, Unity, GitHub, Salesforce, Jira, EDI, NetSuite.
- Core-Competencies: Neuro-linguistic programming (NLP), Deep Learning, Generative AI, Process Automation, Scalability, Predictive Analytics, Roadmap development.

PROJECTS/CERTIFICATIONS

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.
- Applied Python and libraries like Pandas for data manipulation, leveraging rule-based logic for user-friendly financial insights.

NVIDIA Fundamentals of Deep Learning

- Trained and fine-tuned CNN models, achieving 98% accuracy on MNIST.
- Reduced training time by 40% using efficient parameter tuning and scalable architectures.

NVIDIA Applications of AI for Predictive Maintenance

- Developed AI models like XGBoost, LSTM, and autoencoders for predictive maintenance and anomaly detection via leveraging GPU-accelerated frameworks like NVIDIA RAPIDS and TensorFlow/Keras enhancing failure detection

Microsoft Responsible AI Hackathon

- Developed a web application using Power Apps, Power Automate, PowerFabric and Power BI, showcasing real-time data analysis and workflow automation.
- Gained practical knowledge in Responsible AI via solving real-world challenges during hands-on labs improving operational efficiency by leveraging Microsoft Power Platform tools while focusing on ethical governance and deploying scalable AI solutions.
- Engaged in professional networking with Microsoft experts, receiving valuable mentorship on enterprise AI applications.

Autonomous Vehicle simulation

- Programmed a simulated robot to autonomously navigate a track using Raycast sensors and WheelColliders for real-time obstacle avoidance.
- Demonstrated smooth trajectory planning and adaptive control techniques in C#.

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.

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

- Gained comprehensive understanding of the Software Development Lifecycle (SDLC) and emerging technology trends, especially DevOps.
- Created a comparative analysis of Waterfall and Agile methodologies, delivered through an impactful PowerPoint presentation.
- Designed a custom algorithm with pseudocode and flow diagrams, showcasing structured problem-solving capabilities.

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.

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

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