Asim Adnan **Eijaz**

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Experience

Machine Learning Engineer
Dec, 2022 – Present

Stockland — Sydney, NSW

- Built an AI agent to process CAD files and extract project, stage, and lot boundaries. Automated integration into the inventory database, cutting a 1–2 day manual task down to under 10 minutes.
- Designed and deployed an internal GenAI chatbot platform with RAG, access control, and multi-model support on AWS Bedrock. Put into production for research and tax workflows, reducing manual query handling and improving turnaround time.
- Added LangFuse monitoring to RAG pipelines to track prompt quality, output reliability, and apply safety guardrails in production.
- Used LLMs to generate explanability of land price predictions by combining model outputs with contextual data, making results easier for stakeholders to understand and trust.
- Built an LLM pipeline to process thousands of free-text survey responses and extract topic–sentiment pairs at scale on AWS services. Enabled the business to uncover issues not visible before.
- Rolled out internal GenAI training programs for the Data Science & Insights team, helping both technical and non-technical staff use LLM tools in daily work.
- Led evaluations of new LLM-based use cases as part of the company's AI Strategy group, shaping adoption priorities and implementation pathways.
- Implemented a central ML monitoring dashboard with real-time metrics and automated alerts. Improved model reliability and gave business stakeholders visibility of production performance.
- Worked with ML engineers to move models from notebooks into robust AWS Sagemaker MLOps pipelines for training, testing, deployment, and retraining across environments.

Machine Learning Engineer
Feb 2022 – June 2022

Wallace — Melbourne, VIC

- Implemented a comprehensive model monitoring pipeline using TensorBoard, enabling real-time visualization of critical performance metrics during training. Developed configuration management systems, reducing model reproduction time by 50% and enhancing reproducibility.
- Fine-tuned and benchmarked transformer-based audio models (e.g. CNN+LSTM architectures) under varying noise distributions to identify performance cliffs and implement data-augmentation strategies that reduced false activations by 30%.
- Packaged the wake-word pipeline into a Dockerized, parameterized library with CI/CD on GitHub Actions—reused across three product lines.
- Designed and implemented a data collection pipeline using Amazon Mechanical Turk for acquiring diverse voice datasets, ensuring robust model training and evaluation.
- Collaborated with the engineering team to integrate the optimized wake word model into production IoT devices, ensuring seamless deployment and performance in real-world scenarios.

Data Science Intern
Aug 2020 – Dec 2020

Digital Health CRC — Sydney, NSW

- Utilized machine learning to analyze patient adherence to Medication for Opioid Use Disorder (MOUD) and other risk factors for patients with Opioid Use Disorder (OUD). Discovered that higher adherence to MOUD significantly lowers the risk of opioid overdose (OD) following treatment.
- Leveraged machine learning classifiers to predict OD risk. Targeting the highest-risk patients in the top 10% could potentially reduce OD events by 10.4%, primarily driven by non-adherence to medication (72.3%).

Software Engineer
June 2016 – Dec 2018

Tkxel — Lahore, Pakistan

- Spearheaded critical system improvements through advanced debugging and optimization techniques, resulting in an 80% reduction in bug reports and significantly enhancing overall software reliability and performance.
- Architected and implemented robust, scalable RESTful APIs using Ruby, revolutionizing the payment processing system and integrating cutting-edge fraud detection algorithms. This initiative led to an 80% decrease in payment errors and markedly improved financial transaction accuracy.
- Led the design and development of complex, client-specific features from conception to deployment, employing best practices in software architecture, test-driven development, and continuous integration/continuous deployment (CI/CD) methodologies.
- Pioneered the implementation of microservices architecture, improving system modularity, scalability, and maintainability while reducing development cycle times by 40%.
- Mentored junior developers in advanced software engineering principles, code review practices, and agile methodologies, fostering a culture of technical excellence and collaborative problem-solving within the team.

Education

Masters in Data Science & Masters in Research — Jan 2019 – Dec 2021
Macquarie University — Sydney, NSW

Bachelors in Computer Science — Aug 2012 – May 2016
GIK Institute of Engineering Sciences and Technology — Swabi, Pakistan

Personal Projects

LinkedLift – AI-Powered LinkedIn Optimizer

Next.js, TypeScript, Tailwind, OpenAI API, LangChain, Langfuse

Built a tool that takes a resume and generates optimized LinkedIn headlines and About sections using LLMs, improving personal branding and recruiter search visibility.

Live Demo

No-BS Compare – Honest Product Comparison

Next.js, TypeScript, OpenAI API, LangChain, LlamaIndex, AutoGen

Developed a comparison app that uses AutoGen to coordinate a clarifier agent and comparison agent, structured with LangGraph for consistency. Producing unbiased, structured product comparisons, avoiding affiliate-driven bias

Live Demo

Sales Call Analysis with LLM

Python, Whisper, FastAPI, React, LangChain, Hugging Face Transformers

Analyzed sales calls with speech-to-text and LLMs to extract insights, sentiment, and key conversation points for sales optimization.

GitHub | Live Demo

Style My Avatar – AI Avatar Generator

Stable Diffusion, PyTorch, FastAPI, Next.js, Diffusers, Replicate API

Created an AI-powered avatar generation platform using generative models and style transfer to produce personalized avatars.

Live Demo

Customer Comment/Review Analysis with LLM

Python, Langfuse, LangChain, PostgreSQL, OpenAI API

Built an NLP pipeline that uses LLMs to analyze customer reviews, extracting sentiment, recurring themes, and actionable insights.

GitHub

Talent Scout – AI Agent

Python, LangChain, OpenAI API, Vector DB (FAISS), Streamlit

Developed an AI-powered recruitment agent that automatically screens candidates, analyzes resumes, and matches talent with job requirements using LLMs. Integrated vector search for candidate-job alignment and built an interactive interface for evaluation.

GitHub

YouTube Video to Blog Generator

GPT-4, Flask, LangChain, LlamaIndex

Transformed YouTube videos into structured blog posts by combining transcription, summarization, and content planning.

GitHub | Live Demo

Countermeasure Systems for Automatic Speaker Verification Systems

Python, AlexNet, Tensorflow, HPC Computing

A CM system for detection of speech synthesis and voice conversion based spoofing attacks on voice authentication systems. Github Repo

Link to Thesis

Study the effect of medication adherence in Opioid Use Disorder

R, Matplotlib, Seaborn, python, scikit-learn, XGBoost

Used machine learning to investigate the association between patient's adherence to Opioid Use Disorder medication along with other risk factors in patients diagnosed with Opioid Use Disorder and potential Overdose following the treatment.

Link to Publication