

# Asim Adnan Eijaz

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## Experience

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### Machine Learning Engineer

Dec, 2022 – Present

Stockland

Sydney, NSW

- Led the design and development of an internal GenAI chatbot platform, enabling teams to rapidly deploy secure RAG-based bots with fine-grained access control, multi-model support, logging, and evaluation. Delivered use cases for customer research and legal tax exemptions, significantly reducing manual query handling.
- Initiated and scaled a company-wide pipeline for converting thousands of free-text customer survey responses into structured sentiment and topic insights using LLMs. This led to policy changes that accelerated end-of-year settlements and improved customer satisfaction. Mentored juniors and built a prompt library for broader adoption.
- Developed an AI agent that processes CAD files to extract project, stage, and lot boundaries; connected this to the inventory database via geospatial indexing. Reduced a 1–2 day manual task to under 10 minutes with a fully automated pipeline.
- Led implementation of a centralized ML model monitoring dashboard with real-time performance stats and automated alerts across all production endpoints. Enabled proactive maintenance and clear visibility for business stakeholders.
- Collaborated with ML engineers to build robust MLOps pipelines for training, testing, deploying, and retraining models across environments, transforming notebook-based experiments into production-grade services.
- Implemented and deployed deep learning-based N-BEATS models for time series forecasting across several business domains, outperforming traditional ARIMA models and significantly improving predictive accuracy in operational planning.
- Contribute to the organisation-wide AI Strategy working group, where I serve as the lead for evaluating and prioritizing use cases suitable for LLM-based solutions. Help shape strategic direction, assess feasibility, and guide implementation pathways.
- Leading the creation and rollout of internal AI training programs for the Data Science & Insights team, helping both technical and non-technical staff apply GenAI tools effectively to improve productivity and decision-making.

### 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.

## Additional Experience

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### Marketing Technology Consultant

June 2019 – Feb 2022

Hoosh Marketing & BlueprintX

Sydney, NSW

- Engineered a scalable two-way data sync solution between legacy CRM and Marketo using Workato, processing 100,000+ daily updates and overcoming significant API limitations.
- Developed custom tools extending Marketo's capabilities, including 2-way SMS system and conditional logic webhooks, demonstrating proficiency in software design and API development.
- Implemented cross-platform integrations (Marketo, Salesforce, Microsoft Dynamics) using RESTful APIs and middleware, showcasing ability to create cohesive solutions in heterogeneous environments.
- Designed compliant marketing technology solutions for highly regulated industries, balancing complex requirements with effective technical implementations.

## Education

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### 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

## Projects

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### Using LLMs to Convert Text into Categorical Data

Python

This project outlines a solution that leverages LLMs to systematically assign categories to text responses and refine them for accurate analysis downstream.

GitHub

### Talent Scout Agent for CV Evaluation

Python

Built a resume screening agent that evaluates candidates against job descriptions using LLMs. Includes custom prompt pipelines, scoring logic, and multi-shot prompting for consistent evaluation.

GitHub

### YouTube to Blog Generator

Python

Developed a GenAI pipeline that transforms long YouTube transcripts into structured, readable blog articles. Demonstrates summarization, content planning, and sentence-level rewriting via LLMs.

Streamlit

### AI Headshot Generator

Python, Replicate, Flux.1

Developed a prototype to fine-tune a diffusion-based generative model on human faces. The system allows generating realistic, stylized AI portraits of the same person using any prompt. Gained strong traction through a popular Medium post.

Medium Article

### Medium Blog: Practical Generative AI and RAG Systems

Markdown / Medium

Published technical articles focused on RAG pipelines, LLM evaluation strategies, and prompt optimization in real-world deployments.

Medium Profile

### 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