

Nara Eam

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PROFESSIONAL SUMMARY

ML/AI Engineer with 3 years of experience building scalable AI solutions, specializing in Python, C++, Rust, TensorFlow, PyTorch (LSTM, CNN), and LLM frameworks (LangChain, RAG). Skilled in deploying AI microservices with Docker, Kubernetes, and RESTful APIs, with a strong focus on NLP, speech synthesis, and knowledge retrieval systems.

WORK EXPERIENCES

ML/AI Engineer, Norwood System, Perth, Australia, Aug 2022 – Current

- Implement LLM-powered conversational agents using LangChain, and RAG architecture to deliver contextually-aware responses and personalized recommendations, enhancing user engagement and experience quality.
- Utilize machine learning algorithms (predictive modeling, neural networks) with Python, PyTorch to improve data processing and boost prediction accuracy by 30%.
- Architect a robust AI microservices architecture that facilitated seamless integration with existing software components, enhancing system responsiveness by 30%.
- Lead the development of Text-to-Speech (TTS) and streaming solutions, advancing speech synthesis technology projects, and contributing to innovative digital products.
- Develop high-performance C++ API interfaces using STL containers (vector, map) and smart pointer management (shared_ptr) to enable seamless external system integration with AI services, facilitating real-time binary data exchange and low-latency audio streaming.
- Deploy and manage containerized AI microservices on AWS EKS and Azure AKS using Docker and Kubernetes, achieving 20% faster deployment speed and 35% improved scalability across multi-cloud environments.
- Mentor and guide interns on deploying AI services and integrating machine learning models with RESTful APIs into mobile applications, enabling the creation of an AI-agent chat system replicating real-time phone call interactions.

Freelance, Data Scientist/ML Engineer, Perth, Australia Dec 2021 – Current

- Develop Speech-to-Text (STT) systems using Rust, supporting multiple audio codecs and sample rates to deliver robust transcription solutions for client applications.
- Automate data scraping and preprocessing using BeautifulSoup, Scrapy, and Selenium to get data from various sources, enabling enhanced decision-making processes for a diverse client base.
- Develop and train deep learning models (LSTM, CNN) using PyTorch and TensorFlow to perform time series analysis and inference, achieving up to 85% - 90% prediction accuracy in dynamic environments and enhancing model reliability for client projects.
- Design and conduct A/B testing, hypothesis testing, regression, and clustering to evaluate business strategies and optimize customer engagement and product performance.
- Deploy ML models as production-ready real-time analytics services using FastAPI to create high-performance API endpoints, Docker for application containerization and environment consistency, and Kubernetes for automated scaling and management on AWS infrastructure, achieving 95% uptime and 20% latency reduction.
- Demonstrate adaptability and effective communication across projects, meeting diverse client needs and expectations.

Coding Instructor, KZ Code Education, Perth, Australia **Aug 2021 – Dec 2021**

- Delivered coding education in Python to children, adopting innovative teaching methods tailored to individual learning styles, fostering an environment of curiosity and growth.
- Demonstrated excellent communication skills and patience and adapted different teaching methods to meet each child's needs.
- Maintained an engaging and supportive learning environment for all students.
- Received positive feedback from parents and students.

Pacific Home Loan, Sydney, Australia, Intern **Mar 2019 – Jun 2019**

- Engaged with clients to assess their financial needs, guiding them towards suitable loan options and assisting with the application process, showcasing a proactive approach and dedication to client satisfaction.
- Overseeing the recommendation that I provided was fulfilled- by preparing the loan application and performing general duties as necessary.
- Undertook various operational tasks, contributing to the team's efficiency and the smooth execution of services

EDUCATION

Master of Information Technology **Feb 2020 – Dec 2021**

University of Western Australia, Perth
GPA: 6.3/7

Bachelor of Applied Finance **Feb 2017 – Dec 2019**

Macquarie University, Sydney
GPA: 6.5/7

HONORS & AWARDS

The INCITE Award - Research and Innovation Industry **Jul 2025**
WAITTA (Western Australian Information Technology and Telecommunications Alliance)

- Recognized for outstanding digital research, development, and innovation in developing novel AI services and products in Western Australia.
- Award acknowledges innovative impact through uniqueness, technology complexity, and creative trend-setting in digital solutions.
- Demonstrates proven benefits realization through effective problem-solving and understanding of market applications for research outcomes.

The INCITE Award - Dr Mal Bryce WA Tech Company Award **Jul 2025**
WAITTA (Western Australian Information Technology and Telecommunications Alliance)

- Recognized as a leading Western Australian technology company demonstrating outstanding contribution to the state's diverse economy and industry transformation.
- Award acknowledges companies with minimum 5 years trading history, and innovative technology solutions as key business differentiators.
- Demonstrates significant impact on Western Australia through revenue generation, job creation, market disruption, and commitment to continued state presence.
- Recognizes innovative excellence through uniqueness, complexity, and disruptive impact in developing novel "new to the world" technology solutions.

TECHNICAL SKILLS & CERTIFICATE

- **Programming Languages:** Python, R, Rust, C++, Typescript
- **Machine Learning:** Numpy, Pandas, SkLearn, Tensorflow, PyTorch, HuggingFace, CNN, RNN,
- **DataBase Management:** MySQL, SQLite, Postgres, MongoDB
- **Web Development Frameworks:** FastAPI, Flask, Django, Express, Actix_web
- **DevOps:** Docker, Kubernetes, Git, AWS and CI/CD pipelines
- **AI Framework:** Langchain, vectorDB
- **Certificate:** AWS Certified Cloud Practitioner

PUBLICATION

Comparative Evaluation of Speech-to-Text Models for Production Deployment: A Monte Carlo Cross-Validation Study

***IEEE Publication* | 2025 | Paper ID: ICMLC-1173 | First Author**

- Conducted systematic comparison of four prominent Speech-to-Text (STT) models to determine optimal solutions for production deployment environments.
- Developed robust Monte Carlo cross-validation methodology to evaluate model accuracy and latency performance across diverse real-world scenarios.
- Demonstrated that while Small_Whisper achieved highest accuracy metrics, Norwood STT provided optimal balance between speed and accuracy for real-time applications.
- Provided a comprehensive framework for developers and organizations to select appropriate STT technology based on specific performance requirements and operational constraints.

EXTRA-CURRICULAR ACTIVITIES

EY_BWW_Data_Challenge

Feb 2024 – Apr 2024

- Engaged in the EY Open Science Data Challenge, applying advanced data science techniques to assess via satellite imagery.
- Annotated high-resolution satellite images using LabelMe, creating structured datasets for object detection tasks.
- Applied YOLOv8 for detecting and classifying buildings as damaged or undamaged (residential and commercial), demonstrating effective use of deep learning in real-world disaster scenarios.
- Developed TensorFlow models that enhanced cyclone impact analysis accuracy for supporting critical disaster management efforts.
- Worked with a diverse team of experts to leverage collective critical thinking and develop comprehensive disaster management strategies.

REFEREE

Available upon request