






Jui-Chi Liu

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PROFESSIONAL SUMMARY

M.S. Data Science student at Arizona State University with hands-on ML engineering experience in LLM applications, RAG systems, multi-agent workflows, and model fine-tuning & deployment on Amazon Bedrock, SageMaker, and Vertex AI. Fine-tuned a 7B LLM with QLoRA and actively contribute as an AWS Community Builder (AI Engineer).

EDUCATION

Arizona State University, United States Expected May 2027
M.S. in Data Science, Analytics and Engineering (Cumulative GPA: 3.56/4.0)
Fu Jen Catholic University, Taiwan Sep 2020 - Jun 2024
B.S. in Mathematics (Information Mathematics Section) (Cumulative GPA: 3.01/4.0)

WORK EXPERIENCE

Studio Associate (AI/ML), Next Lab Arizona State University, United States Oct 2025 - Present

- Built and deployed a multi-agent WhatsApp learning assistant on AWS, orchestrating specialized agents over course materials with Amazon Bedrock prompt caching to cut latency and token cost, and Amazon Bedrock RAG evaluation (context relevance, faithfulness) to drive iterative retrieval and generation quality improvement.

Solutions Architect (AI/ML), iKala Interactive Media, Taiwan Oct 2024 - Present

- Migrated ETL processes from EC2 to AWS Glue to optimize performance, reducing processing time by 40%.
- Led GenAI solutioning for 60+ customer engagements on Amazon Bedrock, SageMaker, Vertex AI, and AgentSpace — delivering high-fidelity PoCs and advising on production RAG design including chunking strategies, embedding model selection, and retrieval quality.

Machine Learning Engineer Intern, Advantech, Taiwan Jul 2024 - Sep 2024

- Trained and deployed time-series forecasting models (DeepAR on Amazon Forecast) with feature engineering, hyperparameter tuning, and production endpoint deployment, achieving 90% accuracy on demand prediction.
- Built a multi-agent system with LangGraph, exposing GraphQL APIs and integrating a NoSQL datastore, deployed on Azure using Docker Compose (Linux), resulting in a 30% reduction in R&D issue resolution time.
- Built a video translation platform with WhisperX (ASR), Qwen (translation), and XTTS for zero-shot voice cloning and target-speaker TTS fine-tuning; deployed on Azure via Gradio and Docker, improving speed by 50%.

AWS Educate Cloud Ambassador (AI/ML), Amazon Web Services, Taiwan Mar 2024 - Jun 2025

- Developed a full-stack GenAI chatbot with AWS Amplify and Amazon Bedrock agentic workflows, integrating tool use and knowledge retrieval over a Bedrock Knowledge Base, demonstrated to 80+ users.
- Trained 500+ participants on critical AWS services (Amazon Q Developer, SageMaker, Route 53, CloudFront) via YouTube Live and hands-on workshops, achieving 4.9 average satisfaction.

Machine Learning Engineer Intern, eCloudvalley, Taiwan Feb 2024 - May 2024

- Optimized ETL with AWS Glue and PySpark, reducing data preprocessing time by 20%; built recommendation systems with AWS Personalize on user-item interaction data, achieving 90% precision marketing.

EXTRACURRICULAR ACTIVITIES

Workshop Speaker - AWS Community Day Taiwan Oct 2024

- Delivered SageMaker fine-tuning workshop with QLoRA on a 7B-parameter LLM, covering data preparation, LoRA adapter training, and inference endpoint deployment; demonstrated to live audience (5.0/5.0 rating).

2nd Place, Taiwan Generative AI Applications Hackathon May 2024

- Built a RAG customer-service chatbot for Gogoro scooters, using LangChain, Amazon Bedrock, and an OpenSearch vector store; added a question-relevance guardrail and deployed serverless via AWS SAM.

TECHNICAL SKILLS

Language: Python, Java, C, C++, R, SQL

Backend: REST APIs, Microservices, RAG systems, Multi-agent systems, SQL/NoSQL, Data pipelines, Spark

Cloud/DevOps: AWS, GCP, Azure, Docker, Kubernetes, Terraform (IaC), CI/CD, Linux, Git, GitHub Actions

AI/ML: Fine-tuning, Model deployment, LangGraph, PyTorch, TensorFlow, Scikit-learn, MLOps, Prompt Engineering

CERTIFICATES

AWS: ML Specialty, GenAI Professional, SA Associate, Developer Associate

GCP: Professional ML, Professional Data Engineer, Professional Cloud Architect, Associate Data Practitioner

Azure: Data Scientist Associate, AI Fundamentals