Mashaan Alshammari | مشعان عواد الشمري

Email | YouTube | GitHub | LinkedIn | Website

Machine Learning instructor with expertise in simplifying complex ML topics like Vision Transformers and GNNs using PyTorch and JAX. Creator of educational blogs and YouTube educational videos. Prior academic experience at Sydney Polytechnic Institute and the University of Hail.

EDUCATION

Doctor of Philosophy - PhD, Computer Science, *The University of Sydney,*   *2017 — 2021*
Thesis title: Graph Filtering and Automatic Parameter Selection for Efficient Spectral Clustering

Master of Science, Computer Science, *KFUPM,*   *2013 — 2016*
Thesis title: Human In-Place Action Recognition using Combination of Kinect Data Streams

TECHNICAL SKILLS

Social Media	Accumulated over 2.1K watch hours on YouTube.
Platforms	Google Cloud TPUs, Kaggle Notebooks, Lightning AI, GitHub.
Curriculum Development	Created CS curricula aligned with Australia's (AQF) and Saudi Arabia's (NCAAA).
ML Focus	Vision Transformers, GNNs, NeRF, Self-Supervised Learning.

SELECTED PROJECTS

Building a Vision Transformer   **video** | **post**
Developed a ViT model trained for image classification on CIFAR-10. Documented the process in a video and blog post (160+ watch hours).

3D Reconstruction with NeRF   **video** | **post**
Deployed and scaled Mip-NeRF 360 on Google Cloud TPUs for 3D scene reconstruction; benchmarked performance, documented results, and shared deployment pipeline via blog and video (150+ watch hours).

DINOv2 Architecture Analysis   **video** | **post**
Explored DINOv2 and IJEPA self-supervised models using PyTorch; documented architecture analysis and published reproducible code via blog and YouTube (50+ watch hours).

PROFESSIONAL EXPERIENCE

Machine Learning Researcher   *Sep 2023 — Present*
Self-employed   *Riyadh, Saudi Arabia*
- Built and shared educational ML projects using PyTorch, JAX, and Flax.
- Collaborated with researchers from KFUPM and Sydney Uni on GNN models and 3D vision tasks.

Curriculum Development Collaborator   *Sep 2020 — Nov 2024*
Sydney Polytechnic Institute   *Sydney, Australia*
- Led curriculum design for graduate-level ML coursework.
- Courses: Database Systems and Infrastructure (MDS604) and Mathematics for data science (MDS602).

Assistant Professor   *Jan 2021 — Sep 2023*
University of Hail   *Hail, Saudi Arabia*
- Taught machine learning, data structures, and databases.
- Courses: data structures (ICS202), advanced database (ICS434), and machine learning (CSAI510).