

تبارك الأكاديمية السعودية الرقمية لـ

Yara Naif Alotaibi

يارا نايف العتيبي

On successfully completing **Generative AI
MLOps Specialization Bootcamp** in a journey
that lasted **13 weeks** From **24 August 2025** to
20 November 2025
Issue date 20 November 2025

إتمام معسكر همة للذكاء الاصطناعي التوليدي عمليات تعلم الآلة
بنجاح بعد رحلة استمرت لمدة **13 أسبوع** في الفترة من **1 ربيع
الأول 1447** الى **29 جمادى الأول 1447**
تم إصدارها بتاريخ **29 جمادى الأول 1447**

WISHING YOU A CONTINUOUS SUCCESS

مع تمنياتنا بدوام التوفيق والنجاح

Amal A. Aljuhaiman

الرئيس التنفيذي للأكاديمية السعودية الرقمية

أمل عبدالكريم الجهيمان



WEEK 1

Pre-bootcamp

- Welcome session (meet and greet)
- Bootcamp overview and introduction
- Week 0 self-paced learning preparation guide
- Learning support

WEEK 2

Python for AI & Data Fundamentals

- Python essentials, NumPy, pandas, data cleaning, EDA, basic plotting, Jupyter tools

WEEK 3

Introduction to Machine Learning

- Supervised learning, classification, regression, overfitting, model evaluation

WEEK 4

Deep Learning & Neural Networks

- Neural networks, loss functions, activation, backpropagation, PyTorch basics

WEEK 5

ML Model Evaluation & Experimentation

- Cross-validation, hyperparameter tuning, MLflow, experiment tracking

WEEK 6

Data & Model Pipelines in Production

- Data versioning, pipeline design, Airflow/Kubeflow intro, DVC (data version control)

WEEK 7

CI/CD for Machine Learning

- CI/CD concepts, GitHub Actions, Docker for ML, testing ML pipelines

WEEK 8

Serving & Monitoring ML in Production

- FastAPI/Flask model serving, model versioning, Prometheus/Grafana, shadow testing

WEEK 9

Generative AI Fundamentals

- Attention, transformer models, HuggingFace, prompt engineering, embeddings

WEEK 10

Operating LLMs in production

- RAG pipelines, vector databases, LLMs best practices

WEEK 11

Capstone Kickoff & Project Design

- Project scoping, team formation, client briefing (if applicable), dataset exploration, planning workflow

WEEK 12

Capstone Development

- Model development, iteration, fine-tuning, integrating retrieval or agents as needed

WEEK 13

Capstone Completion & Demo Day

- Project Wrap-up and Final Client Project Presentation
- Certification preparation scheduled afterward to maintain project flow