

Links, Cursos y Comunidades

MÓDULO 23: Recursos y Referencias

"El aprendizaje nunca termina."

| Nivel | Duración |
|------------|----------|
| Referencia | Consulta |

Esta lista contiene los recursos más valiosos para profundizar en cada área de MLOps.

MLOps Fundamentales

| Recurso | Tipo | Nivel | Costo |
|-------------------------------|-----------------|------------|--------|
| Made With ML | Curso | Intermedio | Gratis |
| Full Stack Deep Learning | Curso | Avanzado | Gratis |
| MLOps Zoomcamp | Bootcamp | Intermedio | Gratis |
| Coursera MLOps Specialization | Especialización | Intermedio | Pagado |

| Herramienta | Recurso Oficial |
|----------------|--------------------------|
| MLflow | Docs |
| DVC | Docs |
| FastAPI | Tutorial |
| Docker | Docs |
| Kubernetes | Docs |
| GitHub Actions | Docs |

Libros

Esenciales

| Título | Autor | Tema |
|-------------------------------------|-------------------|-------------------|
| Designing Machine Learning Systems | Chip Huyen | MLOps end-to-end |
| Building Machine Learning Pipelines | Hapke & Nelson | Pipelines con TFX |
| Machine Learning Engineering | Andriy Burkov | Prácticas de ML |
| Reliable Machine Learning | Cathy Chen et al. | ML en producción |

Python y Software Engineering

| Título | Autor | Tema |
|--------------------------|------------------|------------------|
| Fluent Python | Luciano Ramalho | Python avanzado |
| Clean Code | Robert C. Martin | Código limpio |
| The Pragmatic Programmer | Hunt & Thomas | Buenas prácticas |

Blogs y Artículos

Blogs de Empresas

| Empresa | Blog | Foco |
|-----------|----------------------------------|------------------------|
| Netflix | Tech Blog | ML a escala |
| Uber | Engineering Blog | ML en tiempo real |
| Airbnb | Tech Blog | Feature stores |
| Spotify | Engineering Blog | Recomendaciones |
| Google AI | Blog | Investigación aplicada |

Artículos Fundamentales

- Model Cards**
 - [Model Cards for Model Reporting](#) - Mitchell et al.
 - [Hugging Face Model Cards Guide](#)
- MLOps**
 - [Hidden Technical Debt in ML Systems](#) - Google
 - [Continuous Delivery for ML](#)
- Testing ML**
 - [Testing ML Systems](#) - Jeremy Jordan
 - [Effective Testing for ML](#)

🔧 Herramientas por Categoría

Tracking de Experimentos

| Herramienta | Tipo | URL |
|------------------|-------------|---|
| MLflow | Open Source | mlflow.org |
| Weights & Biases | SaaS | wandb.ai |
| Neptune | SaaS | neptune.ai |
| Comet | SaaS | comet.ml |
| DVC | Open Source | dvc.org |

Feature Stores

| Herramienta | Tipo | URL |
|-------------|-------------|---|
| Feast | Open Source | feast.dev |
| Tecton | SaaS | tecton.ai |
| Hopsworks | Híbrido | hopsworks.ai |

Monitoreo de Modelos

| Herramienta | Tipo | URL |
|-------------|-------------|---|
| Evidently | Open Source | evidentlyai.com |
| WhyLabs | SaaS | whylabs.ai |
| Arize | SaaS | arize.com |
| NannyML | Open Source | nannyml.com |

CI/CD para ML

| Herramienta | Tipo | URL |
|--------------------|-------------|---|
| GitHub Actions | SaaS | github.com/features/actions |
| GitLab CI | SaaS/Self | docs.gitlab.com/ee/ci/ |
| CML | Open Source | cml.dev |
| Kubeflow Pipelines | Open Source | kubeflow.org |

Serving de Modelos

| Herramienta | Tipo | URL |
|--------------------|-------------|---|
| FastAPI | Open Source | fastapi.tiangolo.com |
| BentoML | Open Source | bentoml.com |
| Seldon | Open Source | seldon.io |
| TensorFlow Serving | Open Source | tensorflow.org/tfx/guide/serving |
| Triton | Open Source | developer.nvidia.com/triton-inference-server |

Videos y Charlas

Conferencias

| Conferencia | Foco | URL |
|-------------|----------------|---|
| MLOps World | MLOps | mlopsworld.com |
| ML Conf | ML Engineering | mlconf.com |
| PyData | Python + Data | pydata.org |
| KubeCon | Kubernetes | kubcon.io |

Charlas Recomendadas

- 1. **MLOps Overview**
 - [Practical MLOps](#) - Stanford
 - [ML Engineering at Google](#)
- 2. **Testing ML**
 - [Testing ML Systems](#) - PyCon
- 3. **Production ML**
 - [ML at Scale](#) - Netflix

Repositorios de Referencia

Plantillas y Ejemplos

| Repositorio | Descripción |
|---|---------------------------|
| cookiecutter-data-science | Plantilla de proyectos DS |
| mlops-python-package | Plantilla MLOps |
| made-with-ml | Curso completo |
| mlops-zoomcamp | Bootcamp MLOps |

Proyectos de Referencia

| Repositorio | Destacado |
|--|------------------------|
| DuqueOM/ML-MLOps-Portfolio | Este portafolio |
| kedro | Framework de pipelines |
| feast | Feature store |
| evidently | Monitoreo de drift |

Cheat Sheets

Git

- [Git Cheat Sheet](#) (GitHub)
- [Git Flow](#)

Docker

- [Docker Cheat Sheet](#)
- [Docker Compose](#)

Kubernetes

- [kubectl Cheat Sheet](#)

Python

- [Python Cheat Sheet](#)
- [Pandas Cheat Sheet](#)

Rutas de Aprendizaje

Ruta Principiante (2-3 meses)

```
1. Python básico → intermedio
2. Git y GitHub
3. pandas y sklearn
4. pytest básico
5. Docker fundamentals
```

Ruta Intermedia (3-4 meses)

```
1. Pipelines sklearn avanzados
2. MLflow tracking
3. DVC para datos
4. FastAPI
5. GitHub Actions CI/CD
6. Testing completo
```

Ruta Avanzada (4-6 meses)

```
1. Kubernetes
2. Terraform / IaC
3. Feature stores
4. Monitoreo de drift
5. A/B testing
6. Auto-retraining
```

Comunidades

Discord/Slack

| Comunidad | Foco | URL |
|--------------------|------------------|---|
| MLOps Community | MLOps | mlops.community |
| DataTalks.Club | Data Engineering | datatalks.club |
| Locally Optimistic | Data Teams | locallyoptimistic.com |

Reddit

- [r/MachineLearning](https://www.reddit.com/r/MachineLearning)
- [r/learnmachinelearning](https://www.reddit.com/r/learnmachinelearning)
- [r/datascience](https://www.reddit.com/r/datascience)
- [r/MLOps](https://www.reddit.com/r/MLOps)

Twitter/X

Cuentas recomendadas: - @ChipHuyen - @kaboroevich - @eugeneyan - @sh_reya

Herramientas de Productividad

| Herramienta | Uso | URL |
|-------------|---------------------|---|
| Notion | Documentación | notion.so |
| Obsidian | Notas | obsidian.md |
| Excalidraw | Diagramas | excalidraw.com |
| Mermaid | Diagramas en código | mermaid.js.org |

Datasets para Practicar

| Dataset | Tipo | URL |
|-----------------------|----------|---|
| Kaggle | Variado | kaggle.com/datasets |
| UCI ML Repository | Clásicos | archive.ics.uci.edu/ml |
| Hugging Face Datasets | NLP/CV | huggingface.co/datasets |
| Google Dataset Search | Búsqueda | datasetsearch.research.google.com |

Mantente Actualizado

Newsletters

| Newsletter | Foco | Frecuencia |
|-----------------|--------------|------------|
| The Batch | AI General | Semanal |
| MLOps Community | MLOps | Semanal |
| Data Elixir | Data Science | Semanal |
| Python Weekly | Python | Semanal |

Podcasts

| Podcast | Foco |
|--------------------------|-------------|
| MLOps Coffee Sessions | MLOps |
| Practical AI | ML aplicado |
| Data Engineering Podcast | Data infra |
| Talk Python To Me | Python |

Navegación

| ◀ Anterior | Índice | Final |
|---------------------------------|------------------------|-------------------|
| 22_CHECKLIST.md | Índice | ¡Guía Completada! |

Módulo 23 Completado

¡FELICITACIONES! Has completado toda la guía MLOps.