MLOPS INSTITUTE

powered by ROCKET SCIENCE

MLOPS ENGINEER CERTIFICATION

Learn how to become a certified MLOps Engineer with our 12-week program

More About

MLOPS Institute

The MLOps Institute is a Canadian organization that offers certified courses, advanced knowledge building, continuing education and custom training for Machine Learning professionals in Canada and internationally. At the MLOps institute, our purpose is to teach, nurture and certify present and future MLOps leaders.

Program mission & benefit

The program seeks to help professionals become certified MLOps Engineers and provide an opportunity to build a career in the field. Our goal is to spread knowledge and help professionals learn the most critical skills in the MLOps sphere.

This program covers all important aspects of the day-to-day tasks of an MLOps Engineer.
In addition to the material, the program offers access to resources, mentors, industry experts and job opportunities:

- Access to our mentors to answer your technical questions and guide your career choice.
- Access to Industry experts' webinars and conferences for free.
- Access to materials and our interactive platform to practice newly developed skills.
- Access to the exclusive placement and job opportunities.

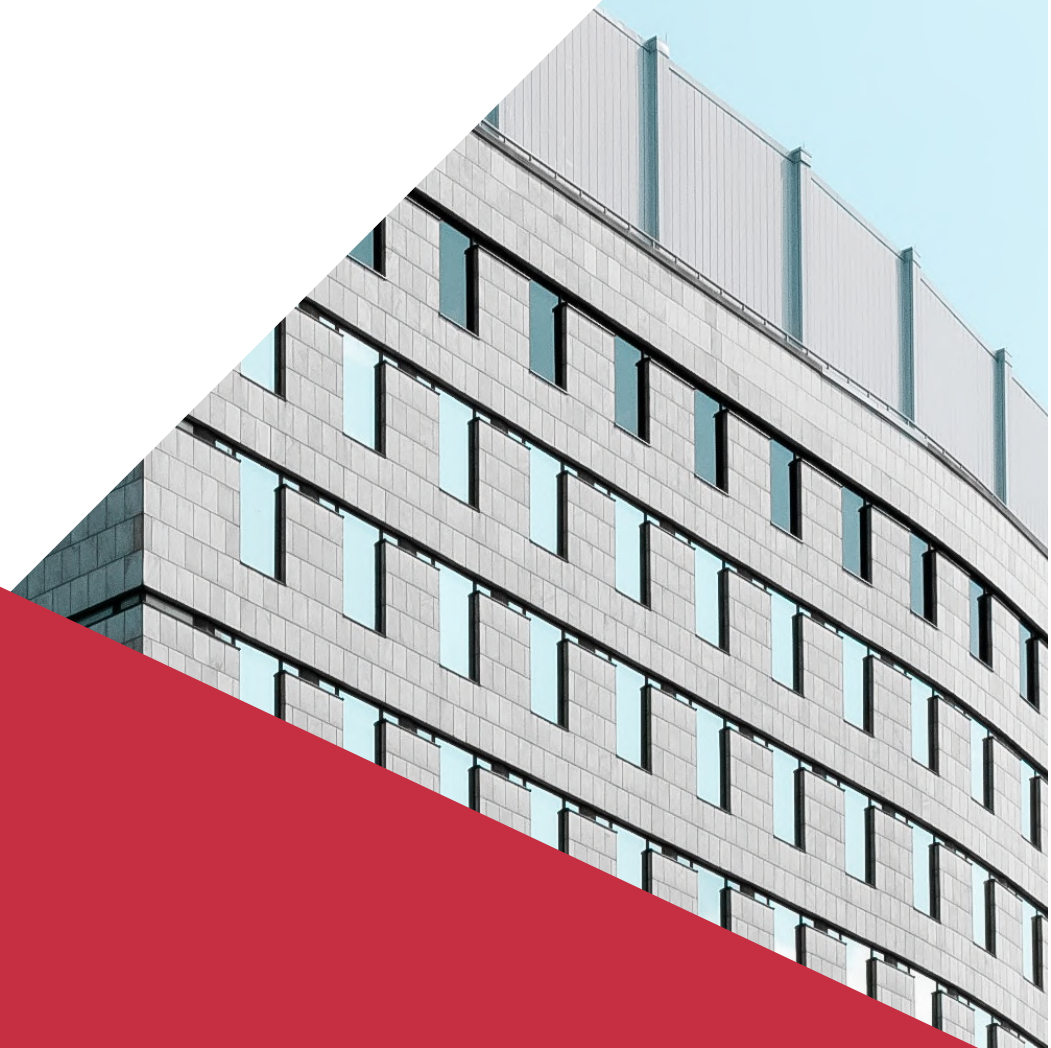
Outcomes & Learnings

Upon completing the program, you will have developed the following skills:

- Manage ML infrastructure on the multi-cloud and on-premises environments
- Containerize ML applications
- Optimize and refactor machine learning code and understand data scientists' challenges
- Deploy CI/CD pipelines for machine learning workflow
- Orchestrate machine learning pipelines using Kubeflow
- Create data engineering pipelines using Airflow
- Deploy ML models in REST API using Flask and FastAPI
- Prototype end-to-end ML application with a modern stack
- Work with a team to tackle production problems in MLOps

Requirements knowledge prior to the program

- Previous experience with Software Engineering
- Experience and knowledge in Python
- Familiar with cloud concepts and computer science in general
- This program is most suitable for students with backgrounds in:
  - DevOps Engineers
  - Data Scientists
  - Data Engineers
  - Data Analysts
  - Software Engineers
  - Other IT Engineers



Schedule

WEEK 1

Introduction to MLOps

This module will cover the introduction to MLOPS and the frameworks used by the Developers and Operations team.

WEEK 2

Basics of Machine Learning and Data Science

This week will cover how a machine learning model works, as a standalone entity and in production, what are the different frameworks for model development and how the coding environments are designed.

WEEK 3

Software Development for Machine Learning Apps

This module will discuss the Software Development Paradigms i.e. OOP and what is YAML language. Each of these is useful for model development, software testings, code refactoring, and model optimization.

WEEK 4

Containerizing ML application

This week will cover the concepts on the orchestration of developed containers, Kubernetes and its architecture, running a pod inside Kubernetes pod, and describing load balancing and scalability offered by Kubernetes.

WEEK 5

Microservices and REST API for ML Deployment

Once the model is developed, how to call that model through a rest API, an endpoint to access the model and get its outputs.

WEEK 6

Container Orchestration and environment concepts

This week will cover Kubernetes and how the Docker image is run inside the pod in the Orchestration environment, the basic commands of Kubernetes and some new CLI tools i.e. kubectl etc.

WEEK 7

Continuous Delivery: CI/CD Pipelines

In this model, we will discover the core components of the various CI/CD pipelines i.e. Jenkins, ArgoCD and Github Action.

WEEK 8

Data Pipelines

This week will cover the core components of 'How a Data Science project makes its place in the production environment'. For instance set of data processing elements connected in series and in a time-sliced fashion and using some frameworks to achieve the automation of the given tasks i.e. Kafka, Airflow

WEEK 9

Automated ML Pipelines

This week will cover how the development of the machine learning model is automated i.e. data collection, feature extraction, model development and model evaluation and then finally converting the model into a form that's ready for production.

WEEK 10 & 11

Capstone project

The whole summary of the Machine Learning Operations Framework will be concluded in the form of a capstone project that will entail the entire life cycle of an MLOPS model, i.e. Model Development to Container building to Orchestration and then project inference in the real world.

WEEK 12

Career orientation week

This week will entail how the given certification will help guide the learners in their journey to endeavour into the MLOPs and the possible opportunities that they can get into. Moreover, some session with MLOps experts where they can share their personal experience with how the MLOPs works and where they would take them in the future.

Capstone Project

The program will finish with a capstone project that will wrap up all the knowledge acquired over weeks 1 to 12. The project will represent a case study requiring you to build an end-to-end Machine Learning Pipeline. The final part of the capstone project will include a live demo of your Pipeline to a committee of experts.

We encourage collaboration for the capstone project, allowing students to work together in a maximum group of 3. However, every student has to submit and present their project to the committee.

Career orientation week

Our program includes a career orientation week that is designed to help you find work in MLOps upon completion of the program. Our placement team will ensure that you are connected with the right hiring managers and prepare you for any interviews giving you the best shot at a new career.
During this week you will:

- Build your resume for the MLOps Engineer position
- Partner with our recruiters to get a position
- Attend conferences on how to hack interviews

Program Advisors

Mohamed Sabri

Founder & CEO at Rocket Science Development and MLOps Institute.
Data Science Mentor at MIT. Instructor, Data Science & Artificial Intelligence at the University of Texas at Austin.
Author of Data Science Pocket Guide.

Asim Sultan

Machine Learning Engineer at Rocket Science Development and MLOps Institute, Mentor at MIT for a Data Analytics Program, Teaching at the University of Texas at Austin.

James Schuback

Product Owner at Rocket Science Development and MLOps Institute.
Former Startup Founder and Small Business Owner. Data Scientist and Machine Learning Engineer, Graduated from the University of Toronto.

Eric Hammel

Machine Learning Engineer at Rocket Science development and MLOps Institute.
Former Data Engineering advisor for Canadian big banks. Masters in Computer Science & Data Mining from Universite Lumiere Lyon.

Adel Benlagra

Senior Advisor in Data Science for Canadian big banks. Instructor, Data Science & Business Analytics at the University of Texas at Austin & University of Quebec Montreal. Ph.D. in Theoretical & Mathematical Physics from University of Quebec Montreal.

Certificate of Completion

*for illustrative purposes only

Application & Fee Details

Application Process:

1. **Step 1: Application Form**
   Register by completing the online registration form
2. **Step 2: Application Screening**
   Your application will be reviewed to determine eligibility for the program.
3. **Step 3: Program Admittance**
   If selected, you will receive an offer for the upcoming cohort including payment deadline details.

Program Duration: **12 Weeks**

Fees: **$2,499 USD*** ~~**3,000 USD**~~

(enroll by July 15, 2022, for a USD 500 fee waiver)

***Financing available, pay in 4 interest-free payments**

Start date: **October 15, 2022**

Ready to become a certified MLOps Engineer?

Apply Now

Contact MLOps Institute for more information about the MLOps Engineer certification.

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www.mlopsinstitute.org