

# Course Activities



MLOps is a broad topic. As such, there is no one size fits all approach for helping you learn. For instance, loading you up with programming exercises does not help if you are a business leader just trying to make sense of the big picture (the operations needed). At the same time, if you are a data scientist you want to understand what bag of tricks are available for you to put your toolbox together so that you can put the concepts into practice. Given the various MLOps topics, we decided to have a sampling of everything. Ultimately, the goal is to help everyone, from business leaders making decisions to software engineers developing the ML maintenance pipeline, to have an appreciation for each other's role in deploying ML at scale into production.

To this end, the course is based on Videos, Google Colabs, Readings, Case Studies, Discussion Forums, Tool Explorations, Quizzes and Tests (for taking the course as part of a certificate program).

**Videos** are the main means by which the instructors communicate directly with you. Each video is generally between 5 to 10 minutes as we find that that's what is most effective for retaining learners' concentration. Each video focuses on specific topics so that you can come back to it.

**Readings** supplement videos. Sometimes they will be used to add more detail to a topic covered in a video. Sometimes they will be used to introduce or summarize additional topics.

**Case Studies** in the form of readings provide a glimpse into some real-world deployments that we have gathered from starts-ups and other major leading organizations that have put MLOps into practice. These case studies talk about the challenges of deploying ML into production for a given use case. More often than not, as you will find out, MLOps is less about coding and more about understanding what are all the components that must click together.

**Discussion Forums** exist so that you can connect with your fellow learners and learn from one another. These forum activities are generally preceded by some open-ended questions that encourage discussion amongst learners. The goal here is to solicit a broad range of opinions.

**Quizzes:** will act as knowledge checks and will be short sets of multiple-choice questions (MCQs) sprinkled throughout the course to make sure you are learning the key themes.

**Tests:** Summative quizzes (aka tests) will only be available to those pursuing the certificate and will act as formal knowledge tests. They will be a longer test of MCQs that will ask conceptual questions about the course content covered in the videos, readings, and collabs, and will also ask questions about the coding assignments.

**Optional:** The following are optional, which we provide in the additional resources section for each module.

- Some sections contain optional labs. **Google Colabs** provide hands-on learning with code in the cloud using Google's collaborative environment and host programming assignments reducing compute resources on your local machines. Don't be alarmed if you aren't a programming guru, you will be able to follow through by reading the detailed instructions and comments we have provided. But if you are a programmer, you will be able to exercise your Python programming skills and explore further.
- **Tool Explorations** will give you the opportunity to explore a variety of external tools that can help you with MLOps at your organization. Again, as this course is targeting a variety of learners, we expect some learners will simply want to know what the tools are, while others will dive in and test them out. In most cases, we will try to not only link the tools but also to tutorials that we think do a good job of explaining how to use the tools.