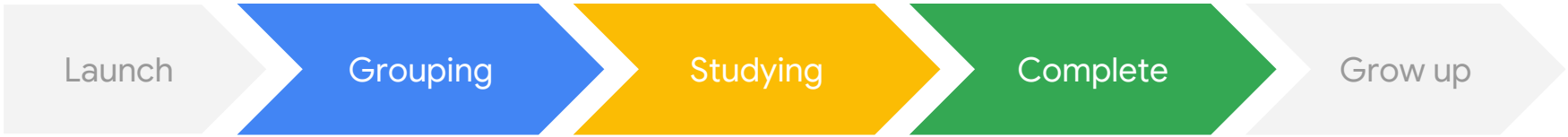
# Machine Learning Study Jam

## Kick-off & Guide

# Machine Learning Edu Program

# Workflow




Google Program Manager

Group Leader

Group Members

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# Development Steps

Developers with big **interest** in Machine Learning

Developers **experienced** Machine Learning through ML Study Jam by MLCC

Developers **studied** in-depth Machine Learning through Advanced Machine Learning Study Jam by Coursera Lectures

Developers having **expertise** in dealing with Machine Learning

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# Milestones


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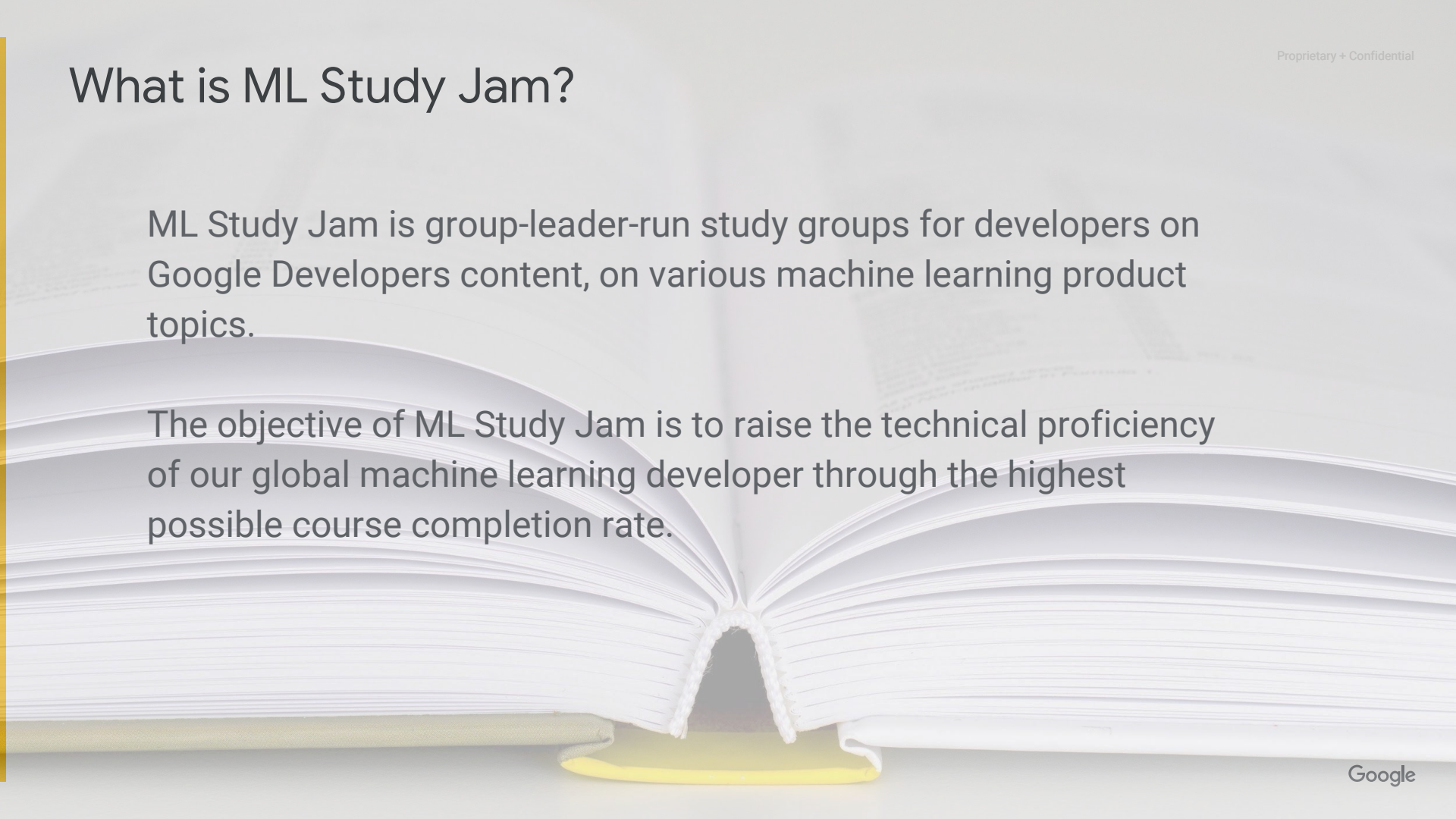
# Machine Learning Study Jam guide

# What is ML Study Jam?

ML Study Jam is group-leader-run study groups for developers on Google Developers content, on various machine learning product topics.

The objective of ML Study Jam is to raise the technical proficiency of our global machine learning developer through the highest possible course completion rate.



# Why host ML Study Jam?

ML Study Jam is a great opportunity to bring developer of your group together to learn something new or advance their knowledge, with the help of a group leader.  Skills learnt in this workshop can be used for personal development or career advancement.

As a complement to large tech talks and viewing party events that you may already be hosting, the Machine Learning Study Jam framework brings together a small group of your developers who are interested in learning about Machine Learning.

# Machine Learning Crash Course

With TensorFlow APIs

# What is MLCC?

## Definition of MLCC

Machine Learning Crash Course is.....

**Vision:** A course to help take people from minimal or no ML knowledge to a point where they can train simple linear or neural network models in TensorFlow. We aim to give them enough knowledge to understand various pitfalls, classic errors, and tradeoffs.

**Course website:** https://g.co/mledu/studyjams

**Languages Available:** Spanish, French, English, Korean, Chinese

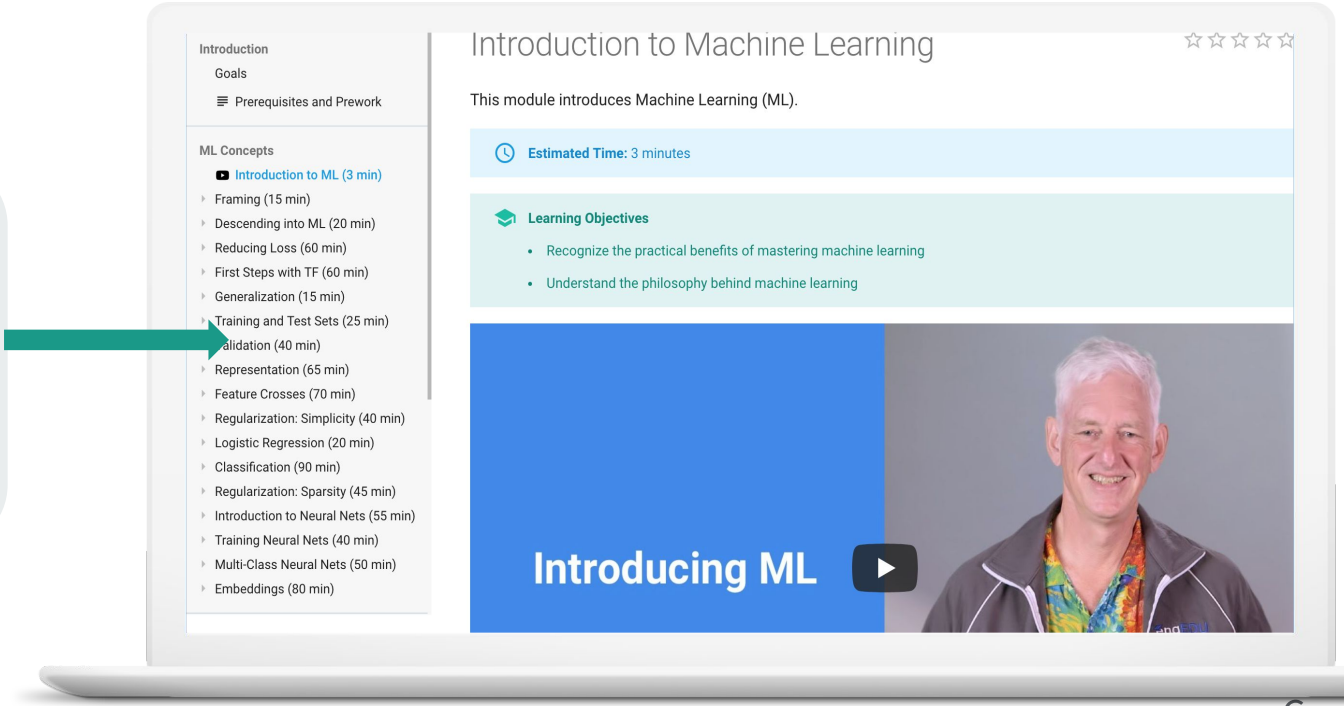
# Who is intended audiences?

Machine Learning Crash Course (MLCC) is intended for those who wish to learn about ML from a practical, applied perspective that will enable them to use machine learning within their everyday projects, and who wish to benefit from the power of TensorFlow wrapped in convenient higher-level abstractions.

This is a great opportunity for audience with basic technical knowledge and limited Machine Learning knowledge willing to gain some practical experience in ML and TensorFlow.

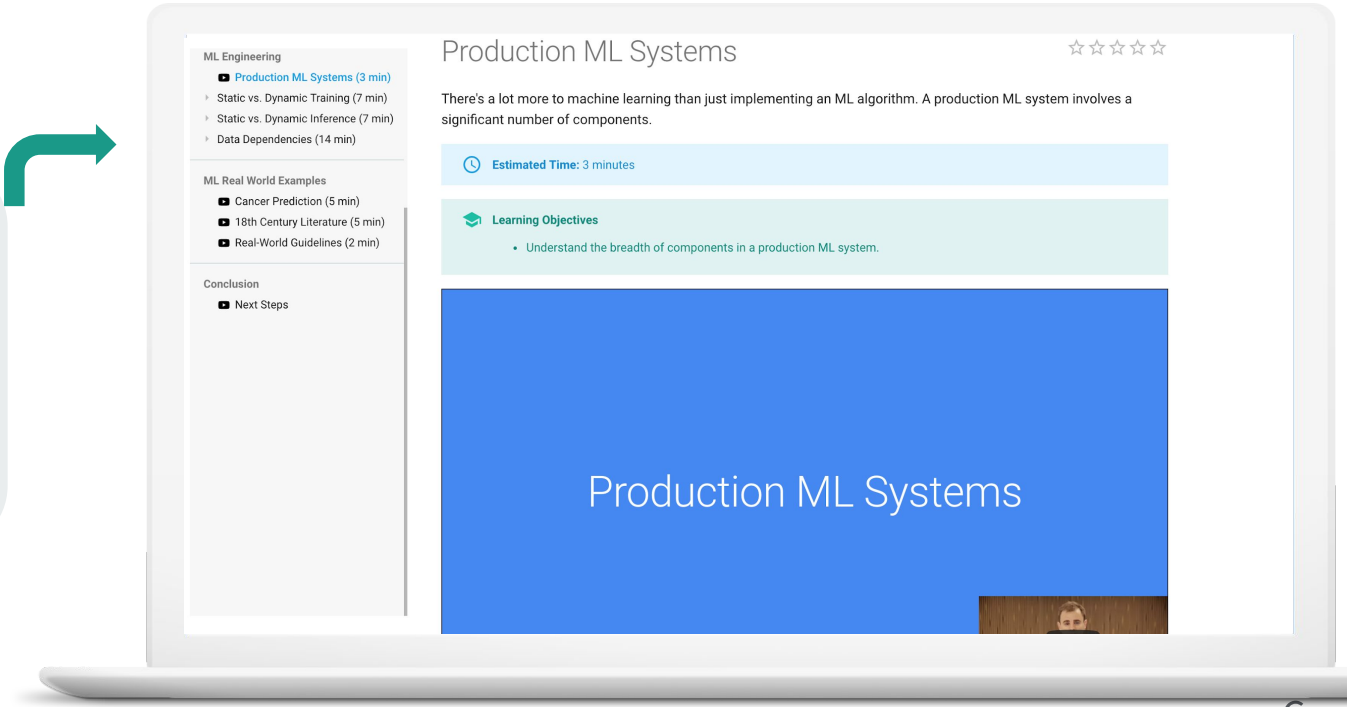
# Course Outline - ML Concepts (1/4)

A list of ML concepts covered in the course



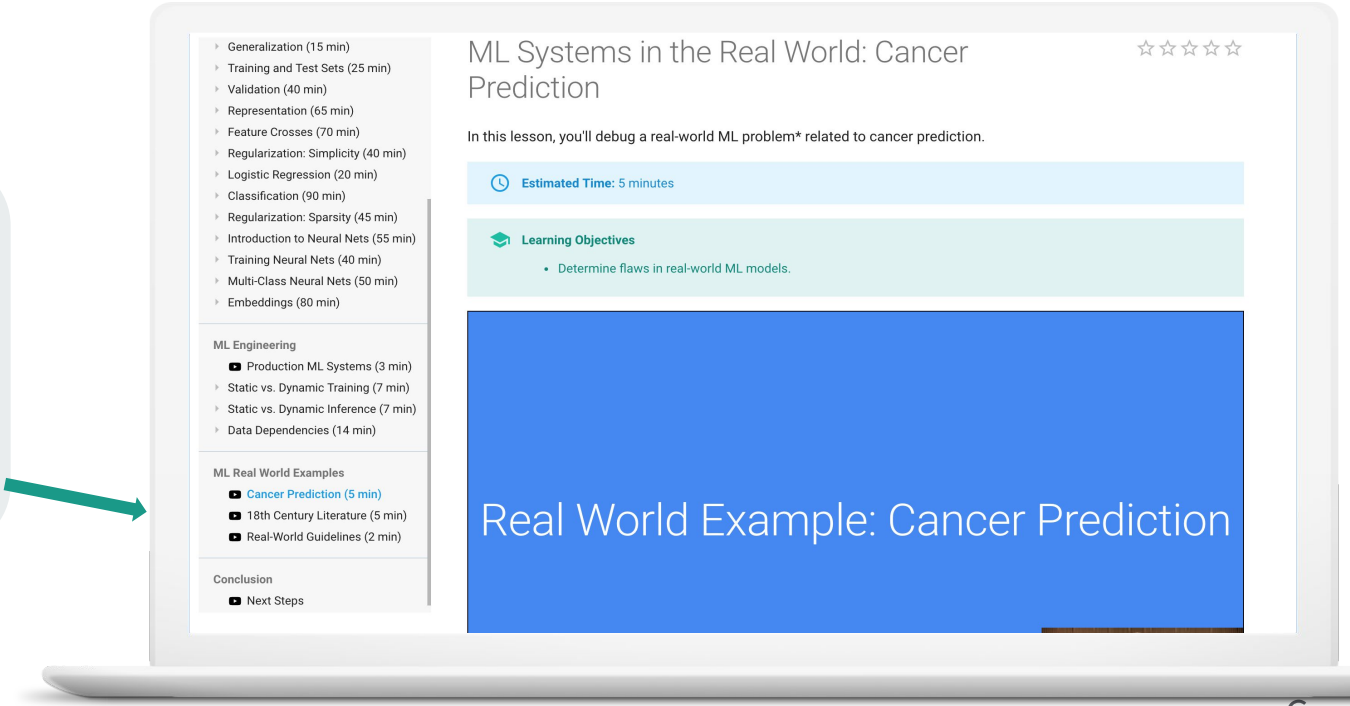
# Course Outline - ML Concepts (2/4)

A list of ML Engineering topics covered in the course



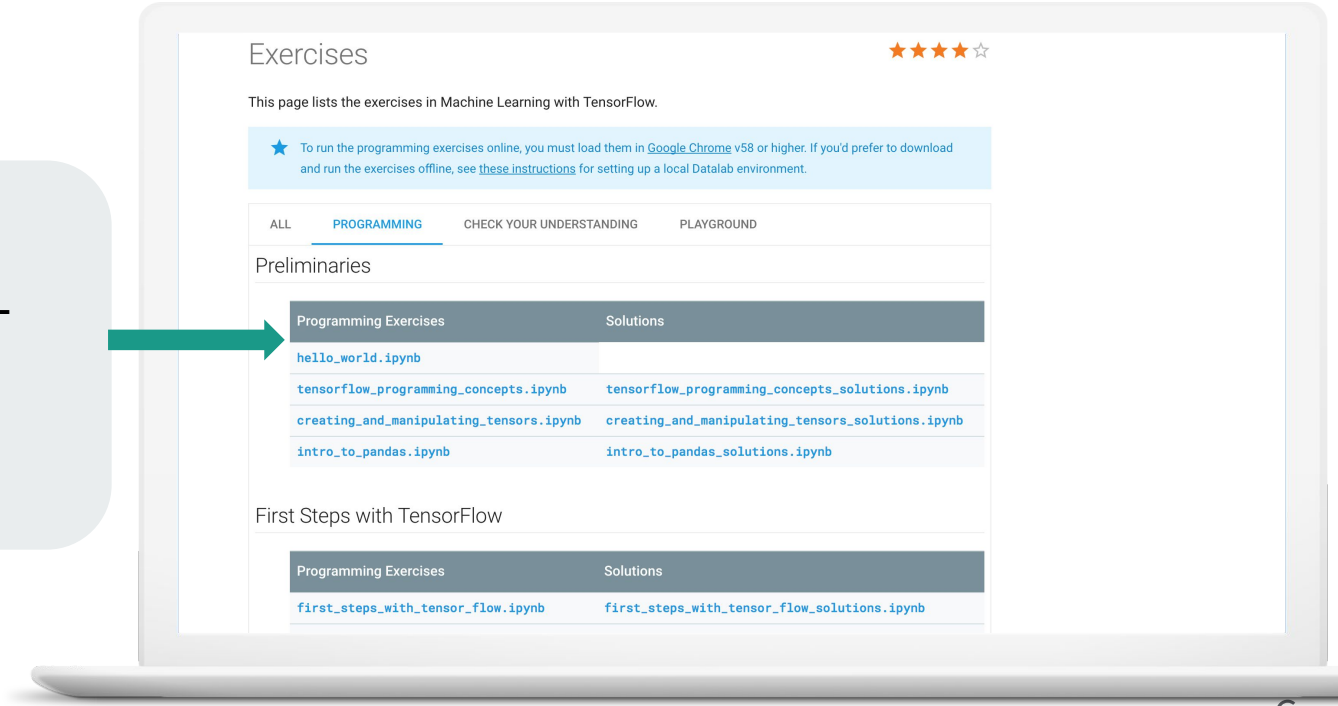
# Course Outline - ML Concepts (3/4)

A list of Real world ML examples covered in the course

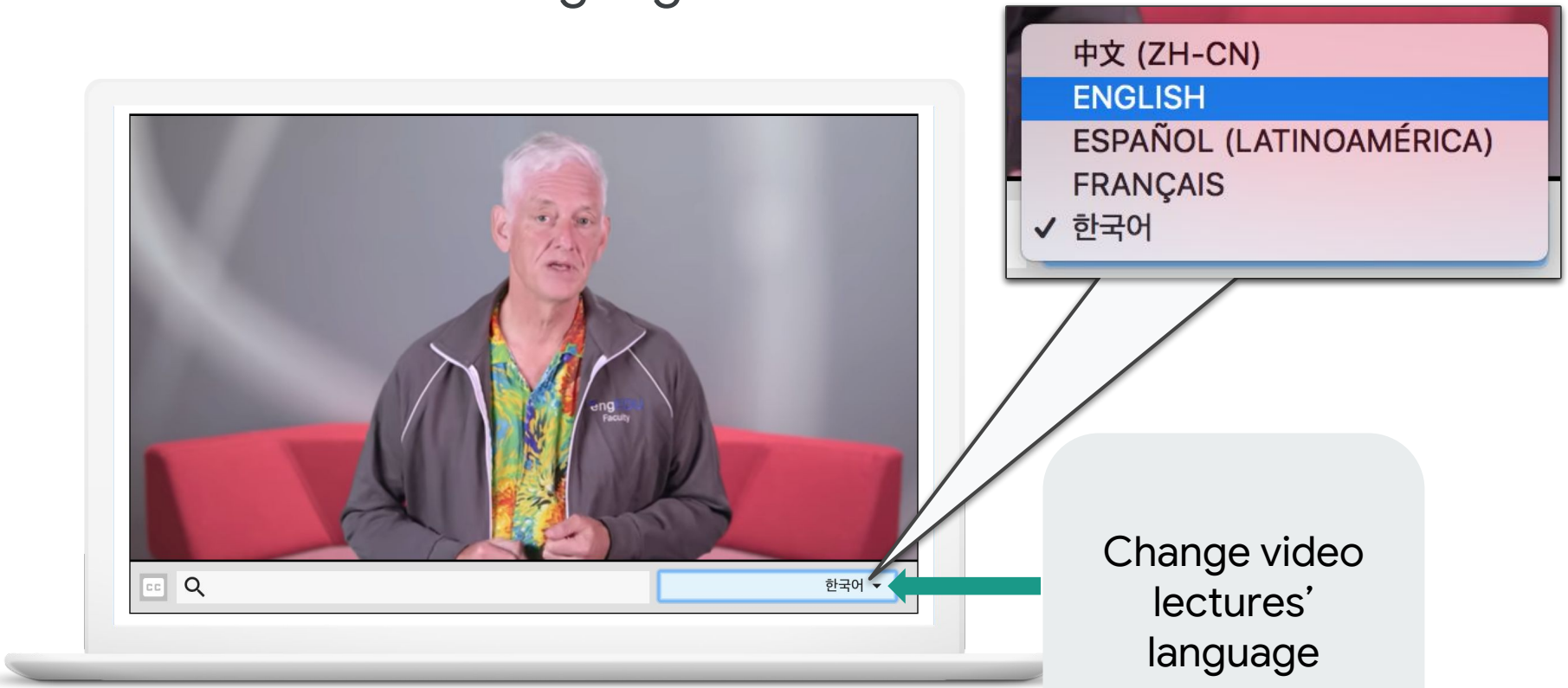


# Course Outline - ML Concepts (4/4)

A list of ML related exercises



# Course Outline - Language



# How do I prepare to facilitate ML study jam?

Any student / professional / entrepreneur who is confident with the course content and prerequisites content, can facilitate this course in their community / study group / college.

1. Course website
2. Pre-requisites

# Event Format

MLCC can be facilitated as a combination of one in-person session followed by self-study time given to the students to complete the course.

- (3-4 hours) Live in-person session
- (4 weeks) Self study period

40+ exercises

25 lessons

15 hours

| | Part-1 : Live in-person Session | Part-2: Self study |
|---|---|---|
| **Total no of hours** | 4 hours of live event | 16 hours of self study - 4 weeks is an ideal duration for professionals |
| **Content breakdown** | Brief overview of MLCC course content<br><br>First 4 modules of ML Concepts, which include hands-on Playground and TF coding exercises | The participants are expected to go through all the remaining units of the course on their own, at their own pace. |
| **Tips** | Give a high level overview of course to the audience, have them try couple of initial exercises and encourage them to take self-study. | Define a specific timeline in which the participants have to complete taking the course.<br><br>Schedule weekly Q&A hangout/maintain slack channel to respond queries coming in. |

# Find Venue

Find a place which has -

a. Internet connection, wifi or ethernet (course can NOT be accessed offline).
b. A whiteboard for describing concepts in more detail
c. Chairs and tables (classroom or lab setup).
d. Power outlets. The event will run for about 6-8 hours.

You can either use lab computers or ask the participants to bring their own laptops. Please make sure the systems have Chrome v58 or later.

[Optional] A projector that the Facilitator can use to share their screen with the attendees.

# Review & Study Resources

a. To get access to all the resources, apply for membership of this Google Group. Allow the team 24hrs to approve your membership.
b. Familiarize yourself with the pre-work.
c. Skim the slide deck: We don't give the slide deck to students by default. The reasoning here is that a lot of material is set up so that students can struggle with a question before getting the answer, and having the slides on hand, reduces that opportunity.
d. Get yourself acquainted with course content and exercises.

# Set up online channel for group members

Decide on what online channel you and your group members will use. Pick one that works in your group. Some possibilities:

- The comments field for the event on Meetup.com
- Facebook group
- Mailing list
- Slack channel
- Google+ community

You will use this channel to share the slides and encourage your group members to complete the labs at home.

Group members will use this channel to ask you questions and share their progress.

Make sure you invite your group members to this communication channel!

# Run in-person Event

## Get into the shoes of a facilitator:

Arrive at least 30 mins early to the room to get settled. Make sure projector, internet, speakers etc are working properly.

Make sure you have a final list of participants and if required, send the same to the security, for entry purpose at the venue.

# Run in-person Event

## Meet and Greet:

As folks come in, go over and introduce yourself individually and welcome them. You won't remember everyone's name, but you may be surprised how many you do, and this can help folks feel welcome and ready to participate. Please check in with them on how they found the pre-work, and answer any questions they might have.

If you're arranging food for participants, make sure to let them know the exact timings of breaks.

# Run in-person Event

## Session Time:

Give folks a few minutes after the scheduled start time to trickle in, then start the session and run from there.

Run through the ML concepts video, Engage and discuss the same with the participants, Encourage them to work on exercises and Help solving the queries after.

# Run in-person Event

| | |
|---|---|
| **30 min** | • Meet and Greet<br>• Make sure everyone has a laptop<br>• Prerequisites check. |
| **10 min** | Overview of MLCC<br>• Briefly explain target audience<br>• topics and scope of course<br>• modality of content (videos, docs, Playground, Colab exercises)<br><br>Then watch Intro to ML module video as a group. |
| **95 min** | Discuss material together of next three modules of MLCC:<br>• Framing<br>• Descending into ML<br>• Reducing Loss<br><br>Split into pairs to do the CYU and Playground exercises |
| **15 min** | Break |
| **90 min** | Watch First Steps with TF video and do the 5 exercises in the module |

# Self-study

## Support:

It is very important to keep the students motivated throughout the course cycle, especially in the self study format.

There will be times when they will get stuck and might give up because there's no one checking in or no one there to help out. Utilise the power of collaboration and community.

Keep in touch with them through different online mediums like email, slack channel, hangout session etc to see if there are any struggles they're facing and if you could help them!

# Encourage your group members online

Encourage group members to post in your online channel when they earn each badge and praise them when they do! Also tell them that they can post their questions there.

You can collect the questions and ask Google and other group leaders in the kr-ml-study-jam mailing list.

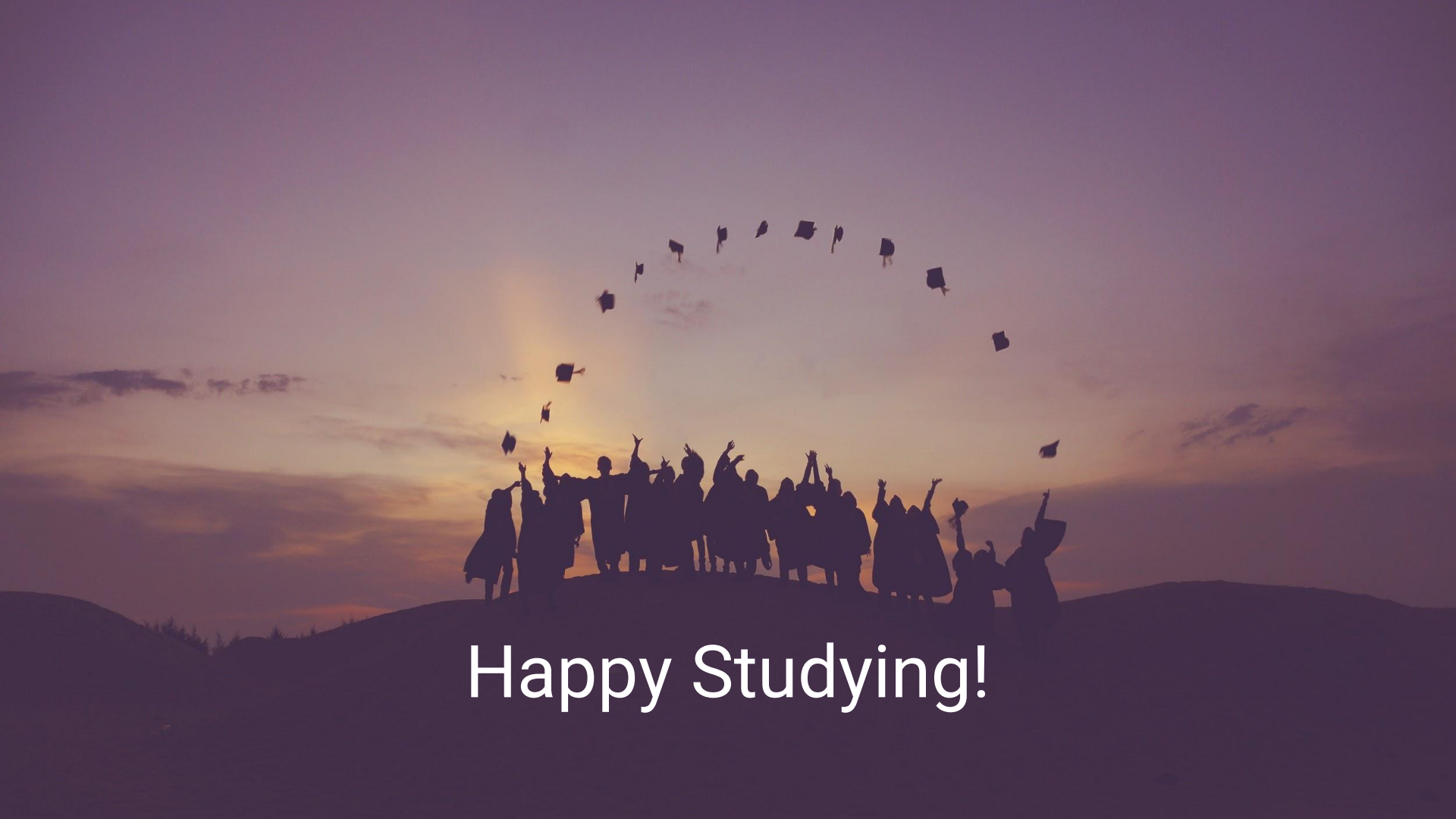
If you or group members have problems with Machine Learning or TensorFlow, ask **TensorFlow Korea User Group**(https://www.facebook.com/groups/TensorFlowKR).

# Celebrate graduation with group members

The next time your group has an in-person meeting, bring up the Machine Learning Study Jam that you completed together!

You might ask anyone in the audience who earned at least one badge to come up and then give everyone a round of applause.

Your group members have worked hard and learned a lot. The deserve to be celebrated, and so do you!


Happy Studying!

# FAQ

# FAQ

Q: Is a group having only 3 group members unable to participate in Machine Learning Study Jam?
A: Each group should have 1 group leader and from 4 to 9 group members.

Q: My group exceeded the number of group members allowed. Can we have group study with MLCC?
A: However, Google will provide benefits(Swag and tickets to Advanced) to 1 group leaders and 9 group members only.

Q: Doesn't MLCC have a kind of certification?
A: MLCC does not support progress checking system as well as such certification.

Q: How to report group members' study progress to Google?
A: Group leaders do not need to report anything about the progress because MLCC does not support such progress checking in itself.

# FAQ

Q: How does Google check study result? How can group members go up to Advance Study Jam?
A: Group leaders select hard and active group members, and share them with Google. Anyone can challenge this study jam, and give it up anytime. Study should depend on student's passion, not just checking.

Q: Do groups have to follow this guide?
A: It's up to group leader's decision. Not only is this guide just detailed reference so they can get some information for smooth operation, but also optional.

Q: Playing MLCC lecture videos in Korean is very inarticulate.
A: We strongly suggest playing in English and refer to Korean sometime because Korean version hasn't been perfect yet.

Q: Language of some lecture videos in MLCC can't be changed to 'English'.
A: First, change web page's language of MLCC at the bottom of the page, and try again.

# FAQ

Q: It says that MLCC requires 15 hours to be compleated. Is it okay if my group spends 15 hours in a day, and complete the study jam?
A: Theoretically, it's okay and possible. However, we suggest having group study chances for more efficient study and frequent networking in the group.

Q: Is there a term between Machine Learning Study Jam and Advanced Study Jam?
A: There is a month between them.

Q: Can group members attend its wrap-up party?
A: Basically, only group leaders will be invited.

Q: Why does group leaders only get many swags?
A: That's because they should work on so many things voluntarily. The benefits are to make them motivated well.

# FAQ

Q: What kind of lectures in Coursera would Google provide us for Advanced Study Jam?
A: The information is going to be announced at the wrap-up party first, and then be shared by email.

Q: Can’t a group leader hand over the leader role to a group member?
A: They can change their role each other once discussed.

Q: My group has updates on group members.
A: Keep having group study for now. Google will share a form so you can update group’s current stauts during the study.

Q: Where can we ask questions relevant Machine Learning and TensorFlow?
A: Go to and ask TensorFlow Korea User Group(https://www.facebook.com/groups/TensorFlowKR).

# Thank You