Data-efficient Deep Learning for Earth Observation

Introduction

https://github.com/HSG-AIML/IGARSS2023_EfficientDeepLearningEO

Michael Mommert, Joëlle Hanna, Linus Scheibenreif, Damian Borth
University of St. Gallen

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We will address these questions in lecture-style presentations of the fundamentals, hands-on coding labs and discussions.

Who we are

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PhD student
”Multi-modal Representation Learning for Remote Sensing”

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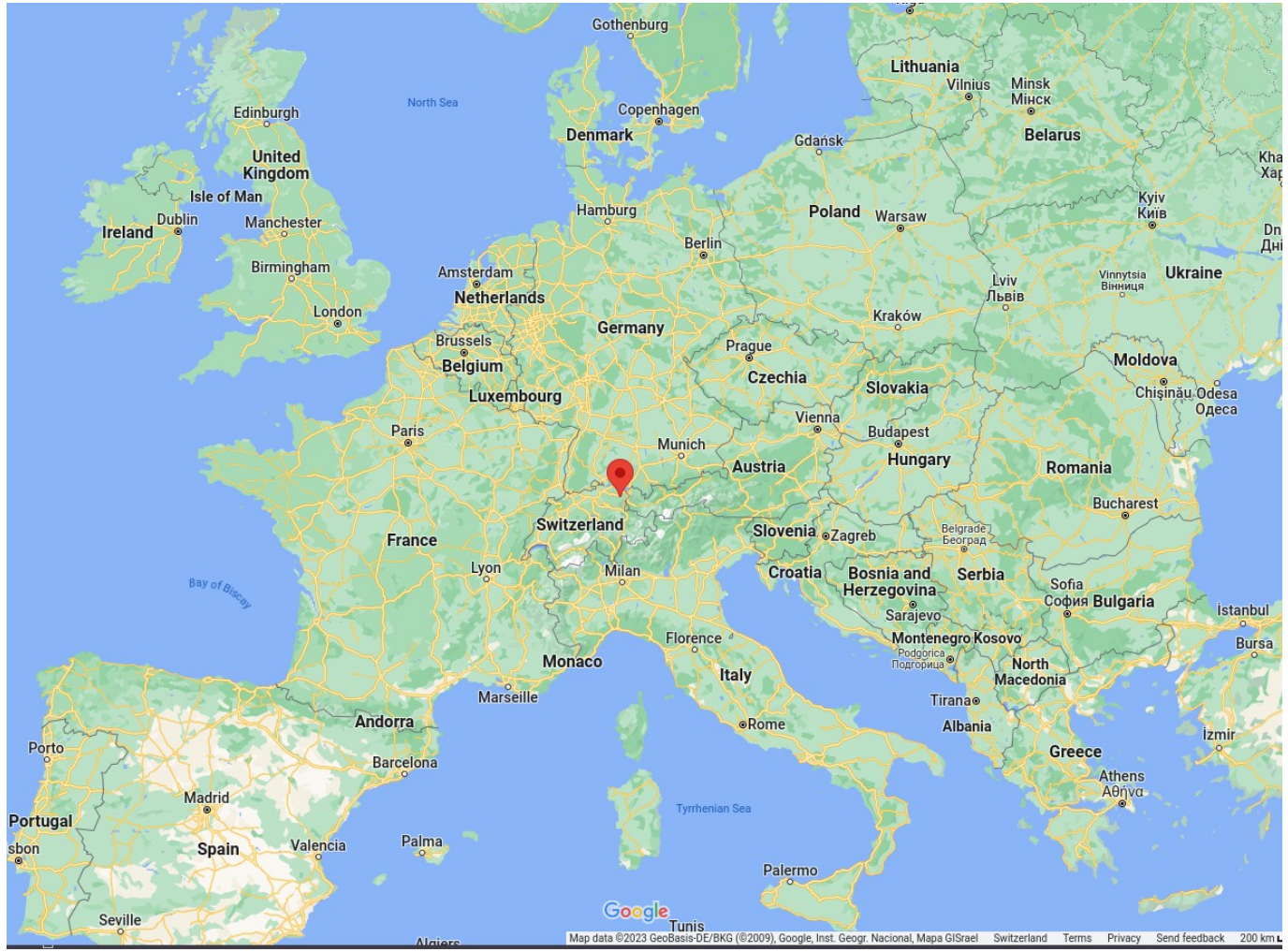
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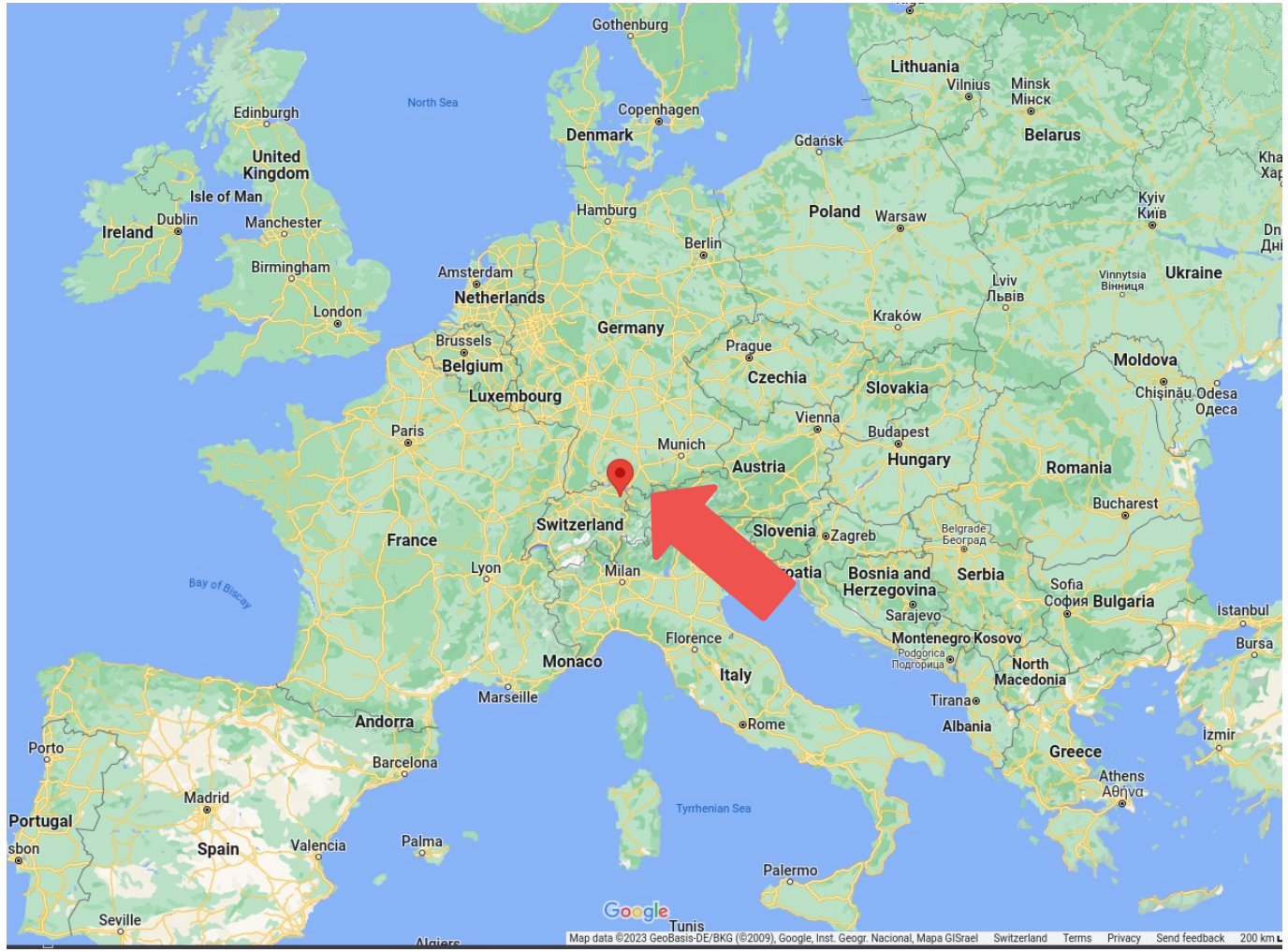
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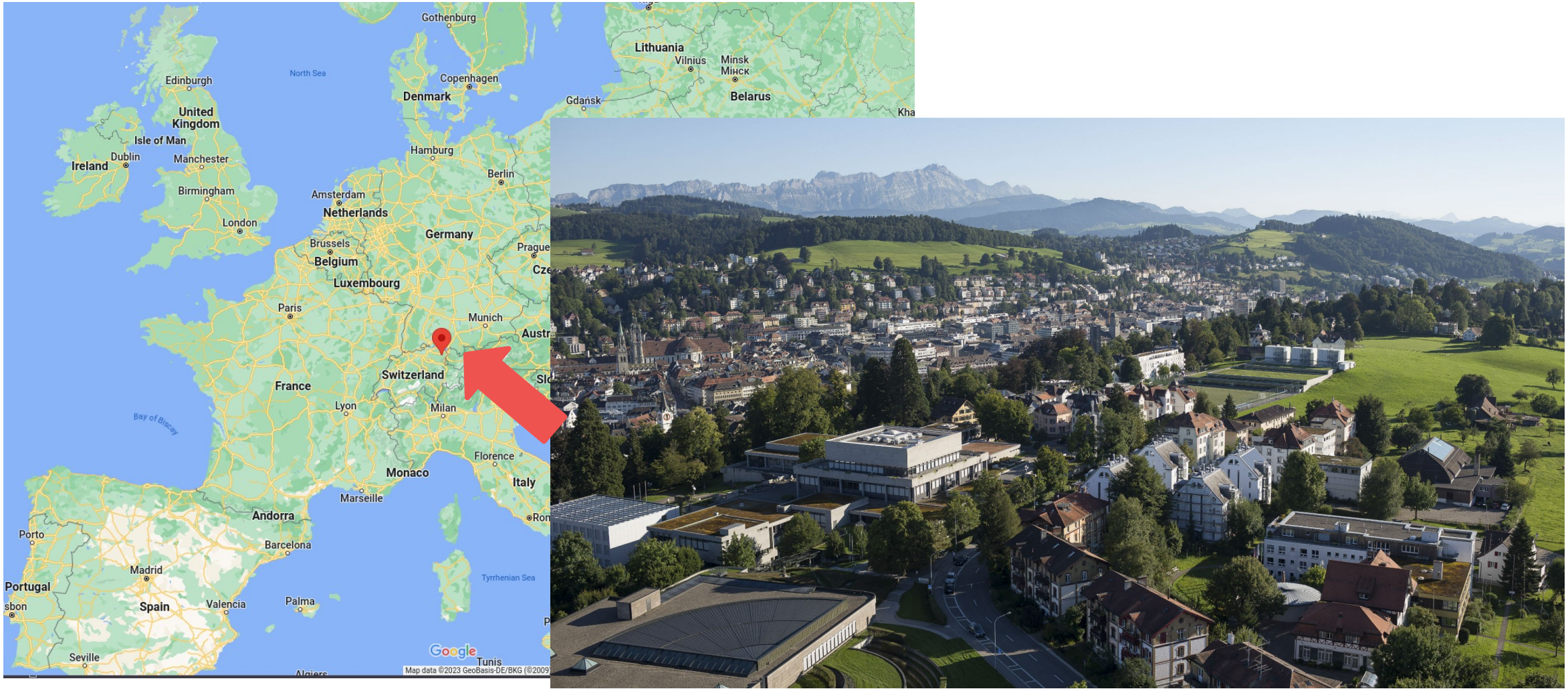
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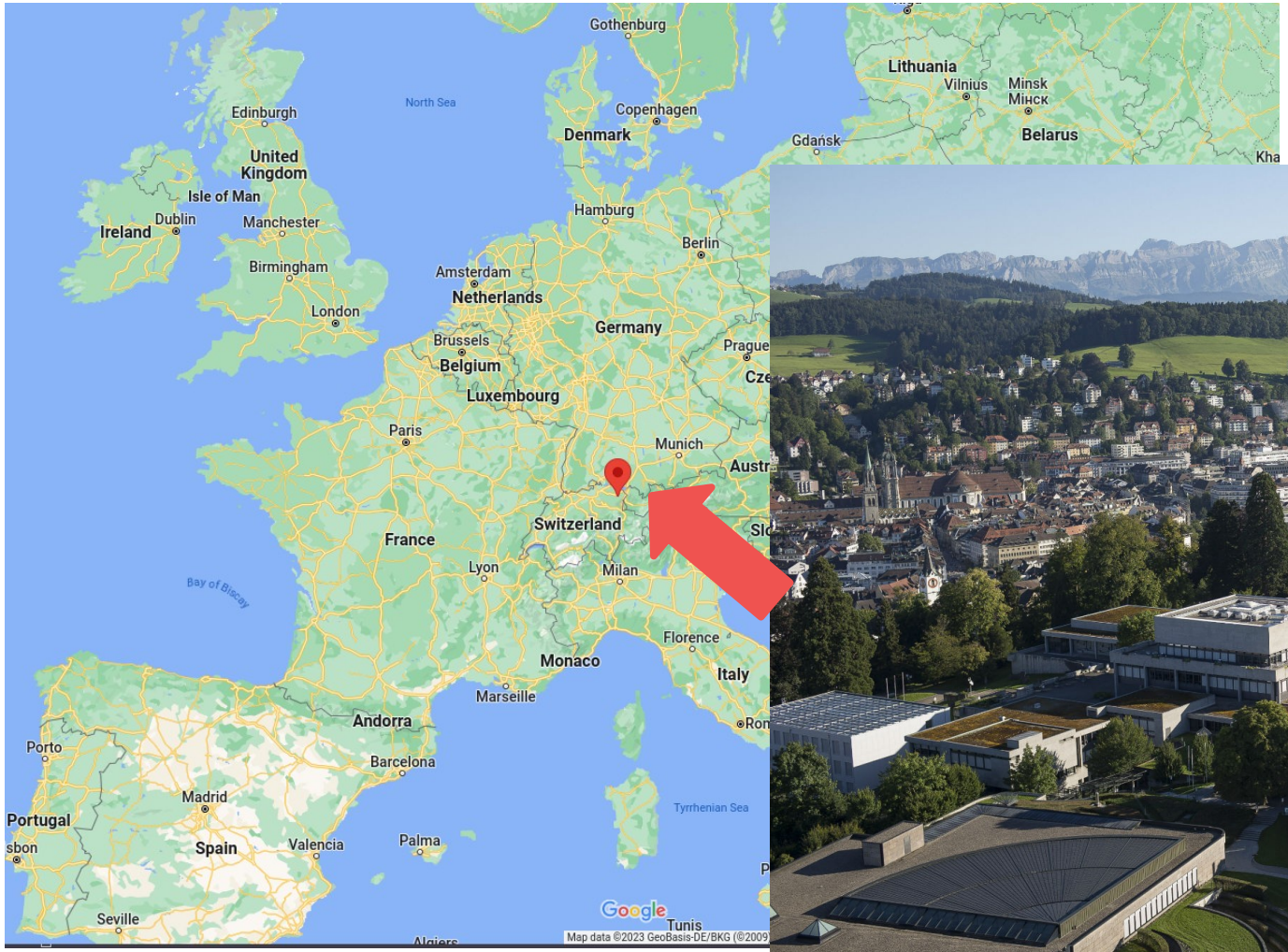

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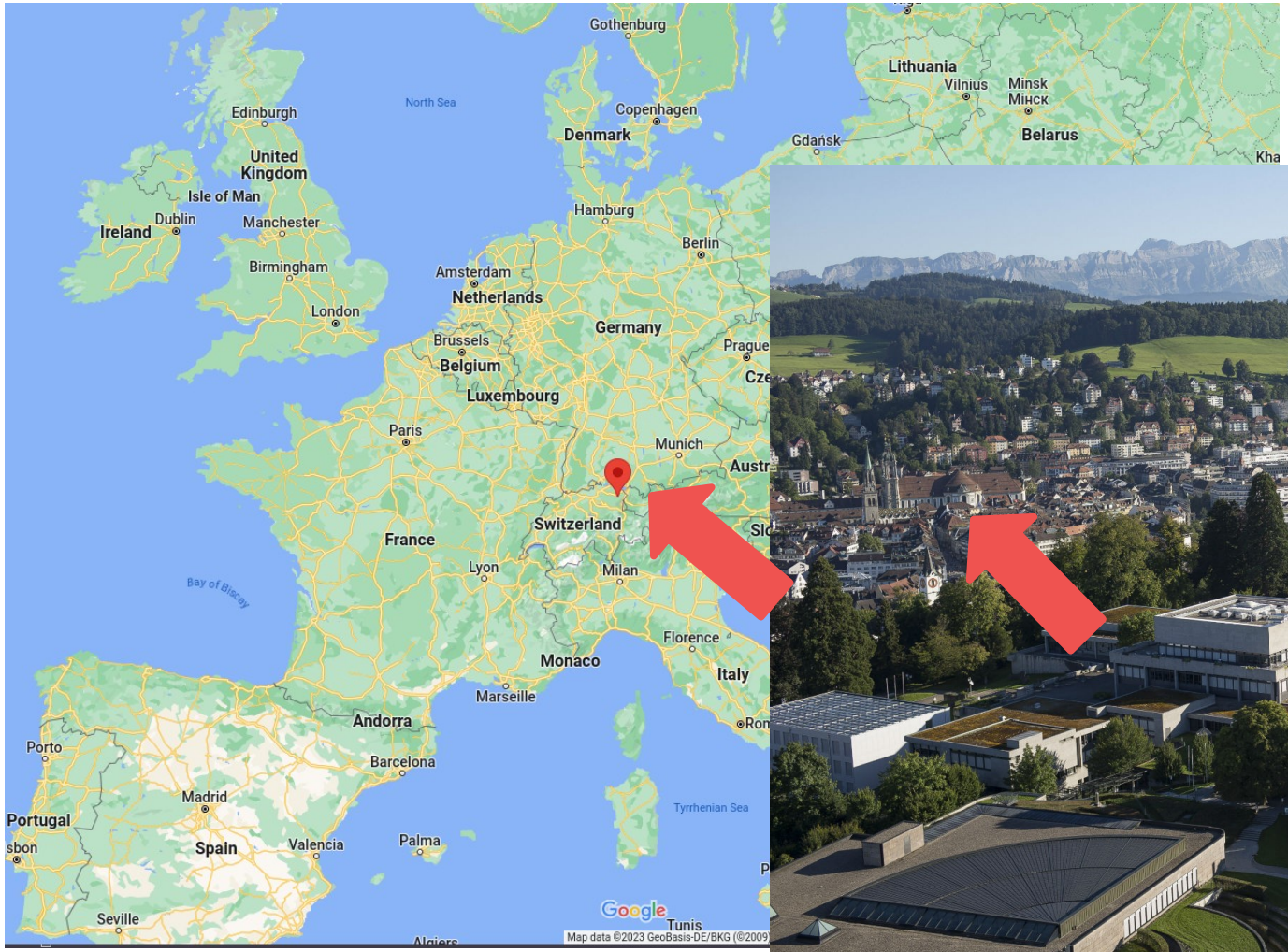

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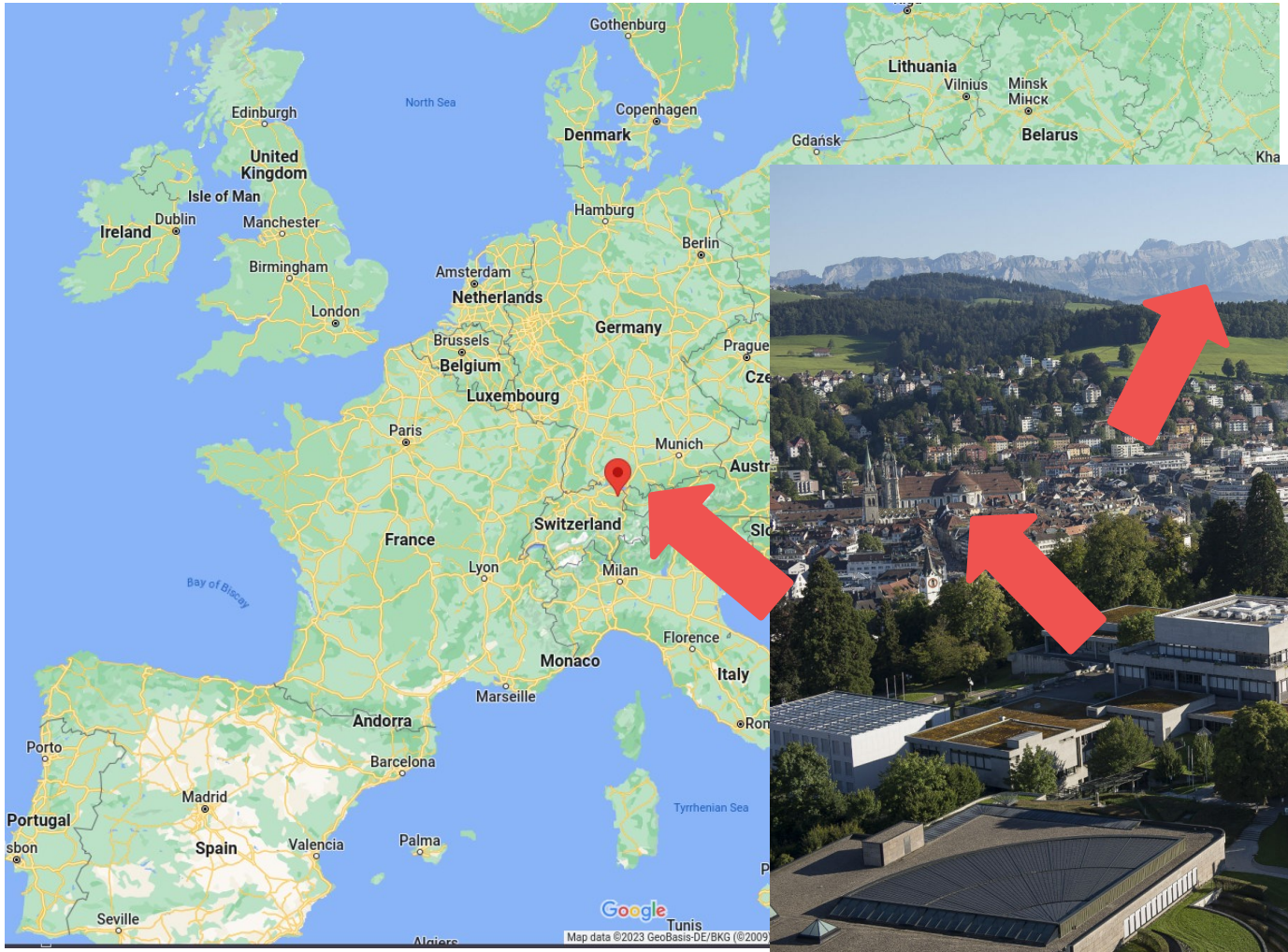

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Today's syllabus

Time	Content
9:00 – 10:20	**Intro, Deep Learning Recap, Data Fusion** (Michael)
10:20 – 10:40	*Coffee Break*
10:40 – 12:00	**Multitask Learning** (Joëlle)
12:00 – 13:30	*Lunch Break*
13:30 – 15:20	**Self-supervised Learning Theory** (Damian)
15:20 – 15:40	*Coffee Break*
15:40 – 17:00	**Self-supervised Learning Lab** (Linus)

Resources for this tutorial

- All coding will be done in Jupyter Notebooks. You can access these Notebooks through github: https://github.com/HSG-AIML/IGARSS2023_EfficientDeepLearningEO
- We will run the Jupyter Notebooks in the cloud. If possible, we prefer to use Google Colab for this purpose. If you do not have a Google account, please let us know.
- The dataset that we will be using is the ben-ge dataset (see https://github.com/HSG-AIML/ben-ge for more information). In this tutorial, we will use a tiny version of ben-ge, which will be made accessible for the time of the tutorial. If you are following this tutorial at some other time, feel free to use the ben-ge-8k dataset (see ben-ge website).