Trial Lecture Data Science Fundamentals

Spring 2023

Universität St.Gallen

"From insight to impact"

The Team

Jonathan Chassot (Lecturer 2023)

Sebastian Plappert (admin program director)

Lyudmila Grigoryeva (Lecturer)
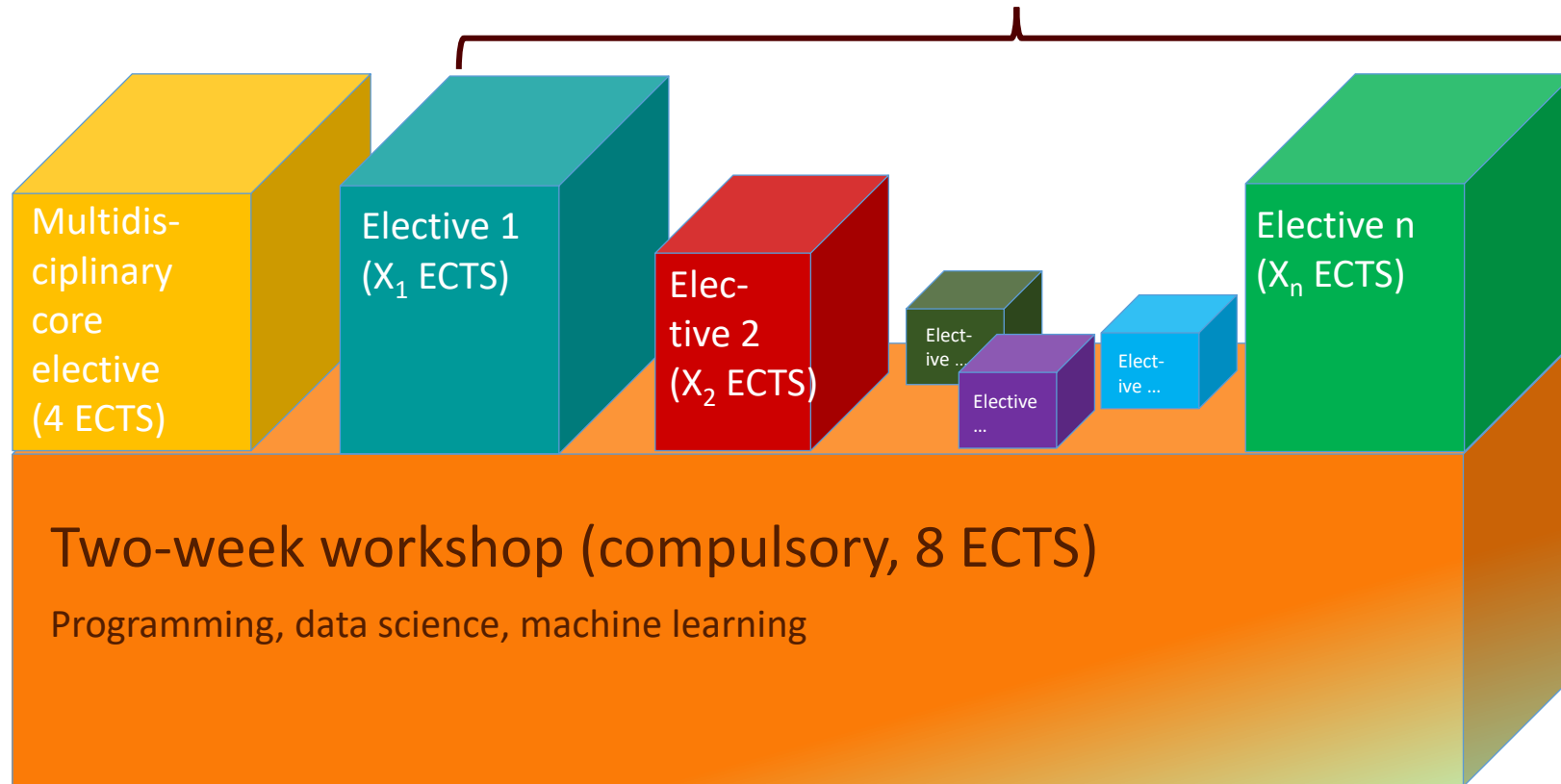
Hannah Busshoff (More than a teaching Assistant ☺)

Johannes Binswanger (academic program director & lecturer)

Who are you?

- Who comes from what Major?

- Who has some experience with programming? (Not required!)

- What is Data Science and Machine Learning for you?

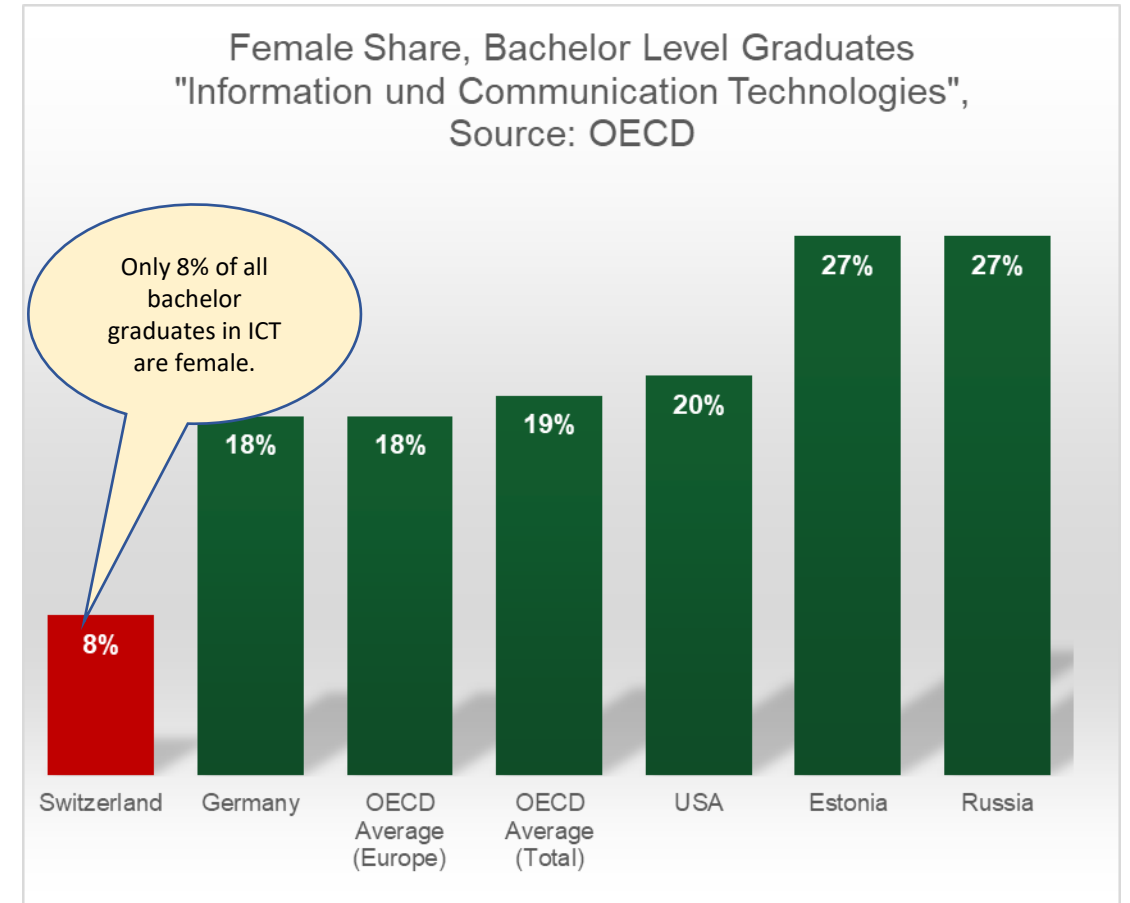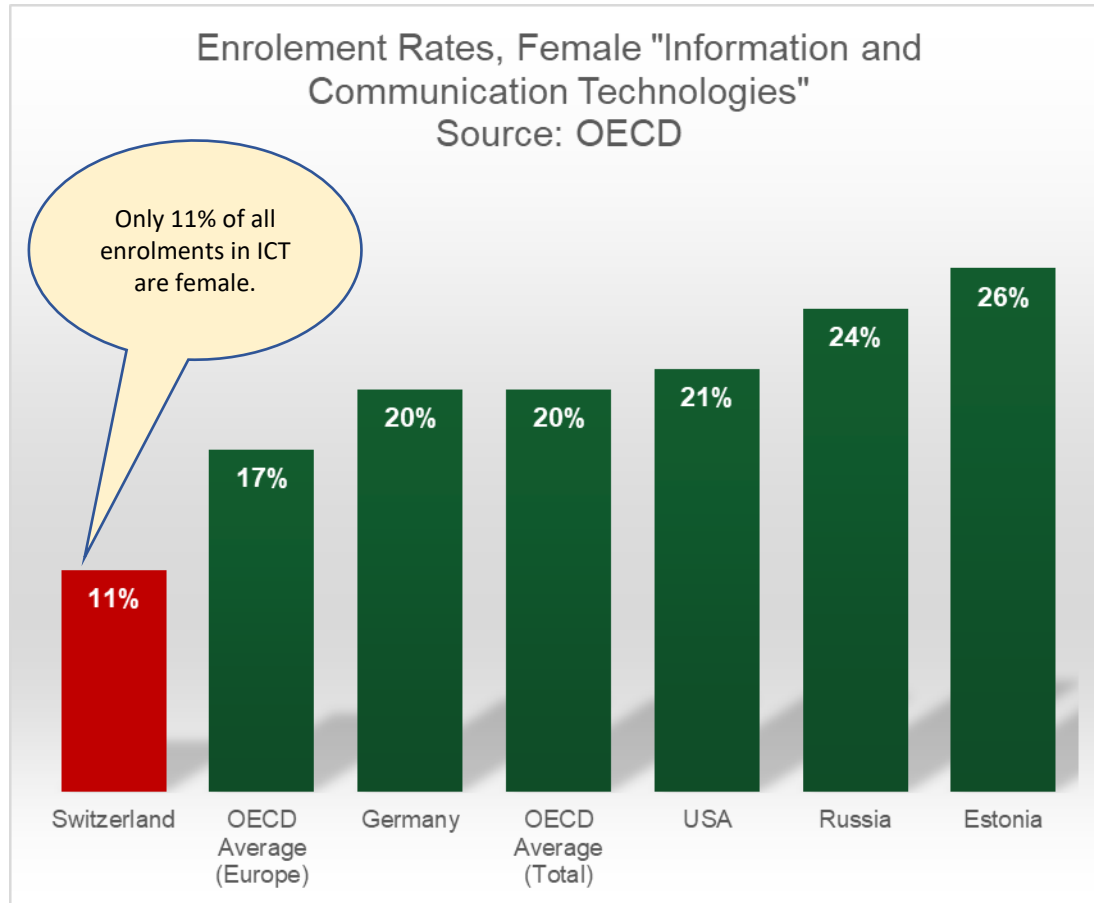- How are you interested in the program

The DSF program

$\sum$ ECTS = 12 (= multiple of 2, 3, 4, 6!)

Multidis-ciplinary core elective (4 ECTS)

Elective 1 (X_1 ECTS)

Elec-tive 2 (X_2 ECTS)

Elect-ive …

Elective …

Elect-ive …

Elective n (X_n ECTS)

Two-week workshop (compulsory, 8 ECTS)

Programming, data science, machine learning

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What do our graduates do?

Women in ICT: Please contribute to change!

If there is interest, we may organize a **«Women in Data Science»** event From DSF 2022 women to 2023 newcomer women.

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Application process

- Motivation letter

- Grades

- Deadline June 30

More info

- https://www.unisg.ch/en/studium/bachelor/zusatzqualifikationen/certificate-in-data-science-fundamentals/

- dsf@unisg.ch

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Today's "Business Problem"

Bike rentals

- Data from Capital Bikeshare, Washington DC bike rental company

- Predicting number of bike rentals during a given hour.

- Why could this be useful for the company?

If you want to know more…

In case you want to know more about the course material

- See https://github.com/JLDC/Data-Science-Fundamentals

- Or watch your own selection of YouTube Videos searching for "data science", Python, "machine learning"… Or blogs etc.

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If you are interested in reading about machine learning

Second Edition coming Summer 2021!

An Introduction to Statistical Learning

Download the First Edition

Winner of the 2014 Eric Ziegel award from Technometrics.

As the scale and scope of data collection continue to increase across virtually all fields, statistical learning has become a critical toolkit for anyone who wishes to understand data. *An Introduction to Statistical Learning* provides a broad and less technical treatment of key topics in statistical learning. Each chapter includes an R lab. This book is appropriate for anyone who wishes to use contemporary tools for data analysis.

The book has been translated into Chinese, Italian, Japanese, Korean, Mongolian, Russian and Vietnamese.

The First Edition topics include:

- Sparse methods for classification and regression
- Decision trees

The Second Edition adds:

- Deep learning
- Survival analysis
- Multiple testing

Springer Texts in Statistics

Gareth James
Daniela Witten
Trevor Hastie
Robert Tibshirani

An Introduction to Statistical Learning

with Applications in R

Second Edition

Springer

Download first edition at
https://www.statlearning.com/

If you are interested in the business aspects of ML&AI

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