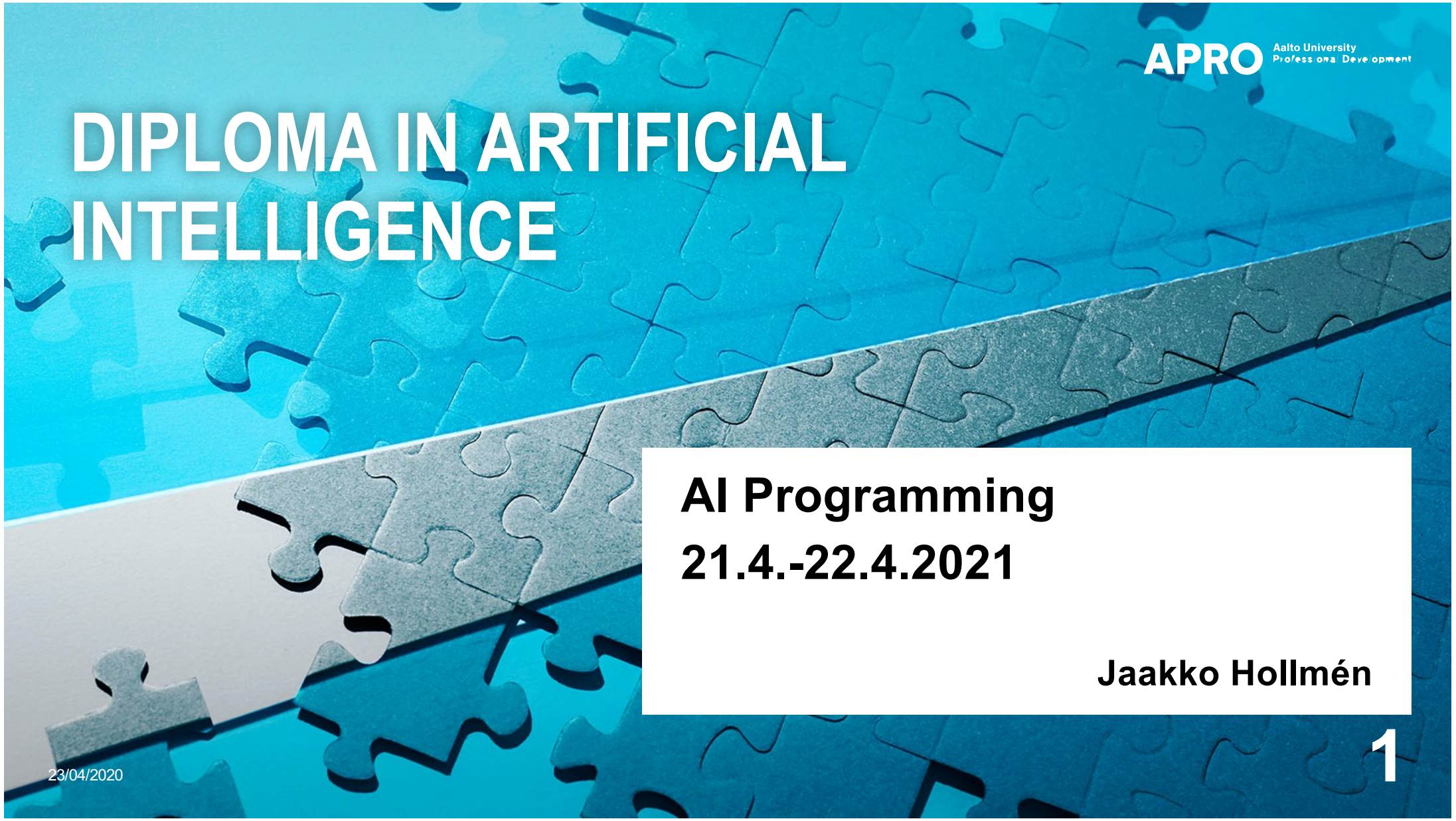
APRO
Aalto University
Professional Development
DIPLOMA IN ARTIFICIAL INTELLIGENCE
AI Programming
21.4.-22.4.2021
Jaakko Hollmén
23/04/2020
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AI PROGRAMMING

The two-day training is divided into thematic sessions, where problems are presented to the students and when students create the solutions to the problems during the session.

Each student should have a computer and preparedness to run Python programs in Jupyter notebooks.

Each session contains a brief introductory lecture to the topic, and description of the programming exercise. Then, student proceed by programming, either alone or in pairs. Towards the end of the session, solutions will be reviewed.

SESSION 3: SELECTING TOOLS AND LANGUAGES

- This session will be covered on the first day during 13.00-14.00

- The learning objective is get familiar with different tools for data analysis, and to think about the strenghts and weaknesses behing the approaches

LECTURE CONTENTS

- Listing of typical programming languages for data analysis
- A quick run-through of typical data analysis scenarios
- How to find a Python library or implementation for a task?
- Description of the exercises

LANGUAGES FOR DATA ANALYSIS

- Any programming language will do the trick, some of more useful than others
- The strength comes from the support of typical analysis tasks
- Python is the choice here on the course: this is widely used, there are plenty of libraries for typical data analysis tasks, Web: https://www.python.org
- R is a free software environment for statistical computing and graphics: https://www.r-project.org
- Lots of little tools around the main programming language (UNIX shell, pre-processing)
- The choice is done either per project, or per task, usually by a team

EXERCISES

- The exercises are listed in the Jupyter notebook Session-2-and-3-Selecting-tools-languages-and-methods.ipynb
- Demostration of the UNIX shell for pre-processing
- Work one exercise at the time
- Not all exercises need to be completed

REVIEW OF THE SOLUTIONS

- How do the solutions look like?