International Research School in Artificial Intelligence in Bergen

AIB 2022, June 7–11, 2022, University of Bergen, Norway

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Preface

These proceedings present the tutorial papers accompanying the lectures of the *First International Research School Artificial Intelligence in Bergen*, AIB 2022, held during June 7–11 2022 in Bergen, Norway. The Artificial Intelligence in Bergen research school aims at disseminating recent advances on AI. It is mainly intended for masters and Ph.D. students, postdocs, and researchers wishing to learn more about the theme of the research school, and is co-located with a workshop where participants are invited to present their work. The broad theme of the school this year was

"Knowledge Graphs and Machine Learning".

Knowledge graphs have gained a lot of popularity as a flexible way of modeling data at large scale. In addition to classical, symbolic, reasoning methods based on ontologies, recent years have seen an increasing trend of using machine learning techniques to complete, correct, or reason with knowledge graphs. The six lectures by renowned researchers given at AIB 2022 provide an overview of the various research topics related to knowledge graphs, with a particular focus on reasoning and the combination of machine learning and symbolic methods.

We would like to thank those who contributed to this first edition of AIB. First and foremost the lecturers and their co-authors. Second, the program committee members for their reviews of these lecture notes. Finally, we are grateful to the organizing committee for the local organization and the website. We also thank the Research Council of Norway, project numbers 316022 and 332921, the Meltzer Research Fund, and the University of Bergen.

March 2022
Camille Bourgaux, Ana Ozaki, Rafael Peñaloza
AIB 2022 co-chairs

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