



Speaker: Prof. ZHAO Ningning

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INFLUENCING FACTORS ON RESILIENT STUDENTS: A STUDY BASED ON PISA 2018 DATA THROUGH MACHINE LEARNING

21.3.2024 (THU) Chair: Prof. LIN Chin-Hsi / Discussant: Prof. LAM Wai Ip

12:30 - 1:30 PM

English / Online Seminar



Closing: 20.3.2024

This study explored the factors influencing the academic resilience of disadvantaged students using PISA 2018 data. The Boruta algorithm was employed to identify key factors, while XGBoost was used to predict students' resilience in reading, math, and science. The Shapley Additive Explanations (SHAP) framework was utilized to estimate the impact of significant factors. The results showed five common factors among the top ten in the three subjects, including sense of meaning in life, classroom disciplinary climate, perception of cooperation at school, expected career status, and fear of failure. Variations in other factors were observed across the different resilience domains. This study offers fresh insights into academic resilience and highlights the critical need to nurture academic resilience among disadvantaged students.



BENEFITS AND LIMITATIONS: MACHINE LEARNING APPLICATIONS IN PISA DATA ANALYSIS

Chair: Prof. LIN Chin-Hsi

Machine Learning (ML) techniques have revolutionized various fields, demonstrating their effectiveness in applications such as data mining for the Programme for International Student Assessment (PISA). This workshop aims to delve into the benefits and limitations of ML methods. It will showcase the impact achieved through the fusion of ML and education while addressing the remaining challenges. Attendees will engage in running ML experiments using Python and participate in discussions to gain a comprehensive understanding of the subject. The workshop seeks to explore challenges, propose potential solutions, and chart future directions for Machine Learning in education.

26.3.2024 (TUE)

1:00 - 3:00 PM

English / Online Workshop



Closing: 25.3.2024



Inquiry: cacler@hku.hk

Co-hosted by

Language and Literacy Education (LALE) Unit

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