

ビジュアルコンピューティングセミナー2022-02

下記の要領で、今年度第2回のセミナーを開催しますのでご参集ください。

日 時:2022年7月28日(木) 15:00-16:15

場 所:慶應義塾大学矢上キャンパス 14 棟 212(DR2)
※Zoom でも配信します。詳細は下記藤代まで



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題 目:Comparative Analysis with Intelligent Visual Interfaces

要 旨:Comparison—the act of finding similarities and differences between two or more groups within datasets—is rooted as a fundamental analysis task. However, this task is non-trivial when analyzing large-network or high-dimensional datasets. In such cases, it is difficult to identify the key contributing factors to the similarities and differences of different groups from all possible relationships or attributes. Representation learning can potentially help this analysis process by extracting influential factors for a particular aspect within a dataset (e.g., data variance). But, due to their inability to cover a wide range of data types and analysis targets, existing representation learning methods have limited capabilities for comparative analysis. In this talk, I will address the challenges of comparative analysis with intelligent visual interfaces where I couple interactive visualizations and new representation learning methods that utilize contrastive learning—a new emerging machine learning scheme to find salient patterns in one dataset relative to another dataset. I will demonstrate the effectiveness of these intelligent visual interfaces for network data and high-dimensional data comparisons by analyzing real-world datasets. Finally, I will discuss future research directions that will further expand the field of comparative analysis.

略 歴:Takanori Fujiwara (<https://takanori-fujiwara.github.io/>) is a postdoctoral researcher at the Department of Science and Technology, Linköping University. He works at the intersection of data science and data visualization where his current research focuses on developing techniques in visual analytics, machine learning, and network science to analyze high-dimensional and network data. He has published his research in top-tier visualization venues, such as the IEEE Transactions on Visualization and Computer Graphics and the IEEE VIS conferences. His work received a Best Paper Honorable Mention at the IEEE VIS in 2019 and the Best Graduate Researcher Award from the Department of Computer Science at UC Davis in 2020. He received his Ph.D. degree in computer science from UC Davis, Master's degree in Environmental Science and B.E. in Systems Innovation from the University of Tokyo, and has worked for Kajima Corporation in Japan.

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